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THE

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BOYAL INSTITUTION GIFT FROM

CONTAINING

ORIGINAL CORRESPONDENCE OF EMINENT PRACTITIONERS,

AND

CRITICAL ANALYSIS OF NEW WORKS

RELATING TO MEDICINE, SURGERY, MIDWIFERY, CHEMISTRY, PHARMACY, BOTANY, AND NATURAL HISTORY.

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FROM JULY TO DECEMBER, 1824.

Et quoniam variant morbi, variabimus artes;
Mille mali species, mille salutis erunt.

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THE LONDON

Medical and Physical Journal.

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For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

HISTORICAL RETROSPECT

FOR JULY, 1824.

ANATOMY (NATURAL) AND PHYSIOLOGY.

ALTHOUGH it is not easy to draw an exact line of demarcation between some parts of minute anatomy and physiology, yet we shall endeavour, in the first place, to speak of matters relating purely to the disposition of parts, and afterwards proceed to those which involve an inquiry into functions.

The subject of Human Anatomy has been too long and too assiduously cultivated, to have left much for the present generation to accomplish in the way of discovery; and whatever improvements take place consist in new descriptions, new plates, or new arrangements, rather than in the development of any natural part or structure not already known. Of late years, indeed, anatomists, despairing of being able to find new muscles, nerves, or arteries, have devoted themselves to what may be termed the unravelling of textures; and the fibres of every organ (for example, of the heart,) have been followed with most praise worthy patience, and every turn and bending of the most minute muscular thread have been described with the utmost precision; nerves have been traced until lost to the microscope; and arteries have received names, even to the "ramusculi ramusculorum." One great advantage is possessed by those who seek for discoveries of this kind,—we mean the extreme difficulty of detecting or proving their inaccuracy; so that, when a description of some very minute piece of anatomy has once been given, it generally passes current for a considerable time, as not one in a thousand has either the opportunity or the patience to repeat the investigation. Nevertheless, some exceptions to this general barrenness of discovery are occasionally to be met with, one of which we formerly alluded to, in the detection of a new muscle in the orbit by Dr. HORNER, of Pennsylvania; and we shall now present our readers with the account which he himself gives of it in an anatomical work recently published.*

* *Lessons in Practical Anatomy, for the Use of Dissectors.* By W. E. HORNER, M.D. Pennsylvania.

"At the internal canthus of the orbit is a small muscle belonging to the internal commissure of the eyelids, which has not been observed before, or is omitted in the description of the part. That it does not belong to either of the above, [obliquus superior et inferior,] or to the orbicularis palpebrarum, a reference to every minute account of them, given by the most eminent anatomists, will prove.

"This muscle is about three lines broad, and six lines long, arising from the posterior flat surface of the os unguis, near its junction with the os ethmoides, and passes forwards and outwards, lying on the posterior face of the lachrymal ducts. As it approaches the commissure of the lids, it splits into two parts, nearly equal, each of which is appropriated to a duct, and inserted along its course, almost to the punctum lachrymale.

"To get a distinct view of it, the eyelids must be separated from the eye, and turned over the nose, leaving the tendinous attachment of the orbicularis and ciliaris muscles. The valva semilunaris is brought into sight by this process, which must be dissected away, and also the fat and cellular membrane underneath it. The muscle is now seen, and, by passing bristles through the lachrymal ducts, its connexion with them is rendered evident; at the same time we get a good idea of its size, origin, and insertion. While making this inspection, by turning the muscle somewhat aside, we shall be rendered sensible of another fact of some importance,—that the attachment of the inner commissure of the eyelids to the canthus of the orbit is imperfectly described, even by anatomists of much minuteness in their accounts. It is attributed exclusively to the tendon of the orbicularis muscle; so much so, that, in the operation for fistula lachrymalis, we are enjoined not to cut through the tendon, least a puckering of the eyelids be produced by their line of extension being destroyed. The fact, on the contrary, is, that a ligamentous matter behind this tendon passes between the internal extremity of the posterior flat surface of the os unguis; so that, admitting the tendon of the orbicularis to be cut through, this ligament, assisted by the little muscle described, would prevent the dreaded deformity. The internal extremity of this posterior ligament is at least half an inch from the insertion of the orbicularis tendon into the usual process, and it brings into a curve commonly seen at their junction. The lachrymal ducts involved in this posterior ligament, passing along it into the sac, instead of going along the edges of the commissure, as commonly described, just under the skin, must influence considerably the position of the puncta lachrymalia, by drawing them towards the ball of the eye, and keeping them in close contact with it: it is therefore a very efficient means for regulating, so far, the lachrymal passages, and for securing the course of the tears. I am indebted to Dr. Physick for a further suggestion in regard to its other uses, which appears highly probable. In cases of extreme emaciation, it is well known that the adipose matter around the ball of the eye is more or less absorbed, causing it to sink deeper into the orbit, and consequently to retire somewhat from the lids. The effect of the muscle is to draw the lids backwards, and to keep them applied on the ball. Again, in the elevation of the upper lid, or rather the drawing of it within the orbit by the levator palpebræ,

the tendency of the margin of the lid is to leave the ball; the upper part of the little muscle obviates this tendency. As such appears to be the actions of the parts, I must therefore coincide with him in calling it *tensor tarsi*, a name expressive of its function."

The minute anatomy of the *Ear* has engaged the attention of Dr. RIBES.* In some of his dissections, he had found the lining membrane of the labyrinth of the ear to be moistened with a fluid of a clear and watery appearance. This fluid, although generally existing in such small quantity as merely to lubricate the inside of the labyrinth, is often more considerable, but still not sufficient to fill the cavities. From having observed that the quantity varied, he was induced to examine to what extent this peculiar fluid occupies the cavities of the labyrinth.

In dissections of persons who had been deaf, he found that the humour contained within the labyrinth was sometimes of a yellowish colour, sometimes of a red and bloody tinge. In the fœtus, the fluid was always bloody in appearance, and occupied all the extent of the cavities. At a later period, it was found more transparent, and less in quantity.

In accounting for a serous fluid being secreted by the membranes of the labyrinth, he supposes it to be analogous to that which is often found in the ventricles of the brain, in the pericardium, the pleura, peritoneum, and joints; and he supposes it to increase in quantity after death.

He dissected the ears of oxen and horses recently slaughtered, to estimate the quantity of fluid within the labyrinth, and repeated the experiment of COTUNNUS, of freezing the ear. He always found fluid, but also a considerable space which was empty. Hence he concluded that there must be air in this space; but how, he asks, does that get admitted, since there is no natural communication with the external atmosphere? He does not solve this difficulty. To discover whether there really be air within the labyrinth, he made some rather clumsy experiments: for example, he put the head of a subject in a basin of water, and fixed it with iron rods; he then introduced a pair of forceps into the ear, and drew away the stapes, at the same time perforating the foramen rotundum; he afterwards poured mercury into the canals. In some of his experiments, air was expelled; and hence he thinks he has proved that air exists in the labyrinth, although he admits that part of it may have been generated after death. He concludes that the internal membrane of the labyrinth is lubricated with a thin fluid, and that an aëriform fluid occupies the rest of its cavities.

The next question he investigates is concerning the manner in which this fluid escapes from the vestibule and cochlea. He had at one time paid great attention to the relative situation of the aqueducts, through which the fluid contained in the labyrinth was supposed to be drained off; but it had not occurred to him, till lately, that this fluid, like the fluids of other cavities, might be absorbed, instead of passing through the pores of the bone. This idea he formed from having observed that,

* *Revue Medicale*, December 1823.

in apoplectic patients, these supposed aqueducts were loaded with blood-vessels. Hence he was led to make injections, and to trace the courses of these aqueducts, by which he found that they were for giving passage to arteries and veins: nevertheless, he still persists in calling them *aqueducts,* and describes their course as such with great minuteness, "winding sometimes round the vestibule and cochlea, and sometimes giving subdivisions which lead into the cavities." After all, he comes to the conclusion which our anatomists had long ago formed,—viz. that these were not aqueducts, but the canals for the passage of vessels. The imperfect knowledge which some of the French possess of minute anatomy, is shown by M. Ribes not being aware that, in describing these openings as being larger in the fœtus than in the adult, he is making only a common observation upon the difference of the cancellated structure of the bone at the several periods of life. We may add, that all he has been labouring to show,—viz. that the passages described by Cotunnus were for the transmission of vessels for the supply of the bone, and the parts of the organ of hearing contained within it, was maintained by BRUGNON, in a paper published in the Transactions of the Royal Society of Turin in 1805.

It is remarkable that M. Ribes never once hints at the labours of Dr. MONRO or SCARPA, nor makes mention of their finished engravings made from dissections. Both of these anatomists describe the vestibule, the semicircular canals, and the cochlea, as being almost completely filled with a thickish fluid, on which the pulp of the nerve is distributed. If M. Ribes believes that air is better adapted for propagating vibration than fluid, he should have discovered within the vestibule some provision similar to the Eustachian tube in the tympanum. But he appears to have forgotten, or to be ignorant of, the most important laws of acoustics. It is also curious that he never once refers to the nerves of hearing as occupying part of the cavities of the labyrinth.

Dr. WEBER, who formerly published a Memoir on the Mutual Relation between the Development of the Head and the Pelvis,* has lately added some additional remarks to what he had formerly said upon the subject. According to his views, the various forms of the head, which are pointed out as characterising different varieties of mankind, are to be found among all nations,—one or other being more or less common among particular races. The principal forms of the head, according to Weber, are the natural, the round, the pyramidal, the oblique, and the square. The same division holds good with regard to the pelvis, that being considered as the natural which is most regular and most generally found. He asserts that the pelvis always presents the same characters with the head, and this not only in the same nation, but in each individual taken separately, whatever may be the sex, age, or the diseases which may have influenced the conformation of the skeleton: in short, in any individual who has, for example, an oblique head, the pelvis will be found equally oblique; and the same relation will be found to exist between their size and proportions. The cranium corresponds to the

* *Journal für Chirurgie und Augenheilkunde.*

great, and the face to the small basin of the pelvis, so that certain lines of these two parts are always in a definite proportion to certain lines of the other. Thus, the width of the head between the cheek bones corresponds to the upper diameter of the small pelvis; and the distance of the nose from the extremity of the chin corresponds to the length of the symphysis pubis. According to this doctrine, as the proportions of the head can easily be ascertained in the living subject, so from them those of the pelvis can be determined; and hence likewise the exact disposition of the uterus, and even the position of the head of the fœtus.—An example is given of a man, forty-one years of age, in whom both the head and pelvis were oblique, being twisted from right to left, in consequence of rickets.*

Turning from man to the lower animals, we find rather more to attract our notice, the field being more extensive, and consequently not quite so minutely examined. Some anatomical facts have been detailed respecting the genital systems of some species, which may prove not uninteresting in a physiological point of view.

On a former occasion we alluded to the discovery made by Dr. GÄRTNER, of a glandular organ in the uterus of some of the lower animals: we are now enabled to give our readers a more circumstantial account, the author having published an essay on the subject,† detailing the progress of his investigations. He was engaged in examining the lymphatics in the uterus of a cow, when he accidentally observed a duct, or canal, filled with a yellowish fluid: this he was satisfied, from its appearance, could neither be an absorbent nor blood-vessel. Traces of it could be followed to within an inch of the ovary, and downwards to an opening, by which it ended, close to the orifice of the urethra.

His next examination was on the uterus of a sow, three years old. Upon the side of the vagina next the bladder, he felt a hard cylindrical body, which he opened, and, finding it to be a single canal, he dissected it upwards for some inches; when, by degrees, it divided into branches, which ran into a glandular body, bearing a considerable resemblance to the pancreas. About two inches further on, it again became a single canal, of very small diameter, which stretched on to the uterus. He injected quicksilver into this duct, and found that the mercury came out into the vagina by a small aperture, just beneath the opening of the urethra. He states that he has examined many uteri, both in the gravid and unimpregnated state, as well as the uteri of animals which had been deprived of the ovaries; and that he has generally found a canal beginning on each side of the place where the vagina terminates in the horns of the uterus, running through a body of glandular structure in the middle of the vagina, under the sphincter vesicæ muscle, and opening into the vagina close by the orifice of the urethra. Dr. Gärtner succeeded in injecting this canal with quicksilver. Before it is injected, it has a

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* *Ein neuer Beitrag zur Lehre von der Conformität des Kopfs und Beckens.*—(Nova Acta Acad. Cæs. Car. Leop. Nat. Cur. 1823.)

† *Anatomisk Beskrivelse over Et ved Nogle Dyr-arters Uterus Undersögt Glandulost Organ.*

whitish firm appearance, and is about as thick as the barrel of a quill; but, after it has been filled, it appears twice as large, and less compact. Upon being cut into, it has the appearance of the vas deferens, though not so firm in its structure. In the cow, this apparatus is somewhat more complicated; the canal on either side of the vagina expanding into a sac, soon after its origin at the mouth of the urethra, and terminating, about an inch from the uterus, in a cul de sac, which communicates by a valvular opening with a duct which begins here. There are numerous follicles filled with a glutinous fluid, and from these cysts a canal runs along the neck of the uterus, and extends to within an inch of the ovary, beyond which it has not been traced.

Dr. Gärtner states that this organ has been mentioned by some of the old writers on anatomy; but we think there can be no doubt of his being entitled to the merit of drawing our attention to a part which has never heretofore been perfectly described,—which certainly had escaped the attention of modern anatomists, and which appears likely to lead to important physiological deductions.

M. Geoffroy St. Hilaire has remarked, that the generative system of the Ornithorhynchus comprehends the two systems proper to birds and the mammalia; and this examination led him to discover the nature and arrangement of the three passages which serve, in birds, for the abdominal discharges. In the Memoir before us,* the author first makes some general remarks on the sexual system of birds, shewing that in these animals the pelvis is widely open in front, turned backwards, and extending beyond the sacral vertebræ, which it embraces; so that the intestinal canal, being deprived of the situation it has in the mammiferous animals, terminates in the fundus of the urinary bladder. Having pointed out the causes which influence the relative position of the organs, he proceeds to distinguish the parts which have been confounded under the general name of *cloaca.* He calls the space comprehended between the two sphincters of the rectum the "rectal vestibule." In some, as the Ichneumon, or Egyptian rat, this interval is considerable; in other animals the two sphincters are blended; but, in the greater number of the mammalia, this space is formed by two anuses widely separated from each other,—one internal and the other external. In the ostrich, in particular, this vestibule is extremely distinct; but in other birds, as hens and canaries, the vestibule and the bladder form one common pouch of great size, in which is found a narrow cylindrical compartment, where the vasa deferentia in the male, and ovarian ducts in the female, end on either side. This canal, being distinctly perceptible in all animals, is called by M. Geoffroy the "uretro-sexual canal." Another compartment in birds is called by him the "bag of the prepuce," *(bourse du prepuce;)* and this is the last of the pouches. Proceeding, therefore, from without inwards, we have the pouch of the prepuce, the uretro-sexual canal, the urinary bladder, and the rectal vestibule, the whole of which collectively constitute what has received

* *Considerations generales sur les Organes Sexuelles des Animaux, a grande Respiration et Circulation.*—Memoires du Mus. d'Histoire Nat. 5 cahier.

the common name of cloaca; each of these has its correspondent part in all the mammalia. Under the name of "accessary bag," M. Geoffroy describes a superadded bag, which opens into the bag of the prepuce above, and at the root of the glands of Cowper, serving as their excretory duct.

In the subsequent part of his Memoir, the author proceeds to consider the generative system of other animals; and concludes by remarking, that the application of certain rules always brings us to a sort of imaginary type, to which all the varieties of form and modifications of organization may be referred; this theory being the leading principle which directs the zoological pursuits of this distinguished naturalist.

Professor JACOBSON, whose interesting discoveries with regard to the veins we formerly had occasion to notice, has lately devoted his attention to the anatomy of the supra-renal capsules,* which he has found in all the quadrupeds and birds he has examined, while he has observed them in but very few reptiles; neither has any thing analogous been detected by him in fishes, with very few exceptions, *(raies et squales.)* In birds, these supra-renal glands have two sets of veins,—one which carries blood to them, and another by which it is again removed, in the same way as takes place in the kidneys of these animals. He conjectures that a similar organization may exist in the fœtus of the quadruped at an early period of its existence, and that the supra-renal capsule may undergo some peculiar change, or be arrested in its development.

Some works of value have been published on anatomical subjects, tending to facilitate the study by improved arrangements and comprehensive views: among these, the "Elements" of M. BECLARD deserve to be noticed here.† BICHAT conferred an invaluable obligation on medical science when he directed the attention of its cultivators to the minute structure of individual textures. Gifted with extraordinary talents and an enthusiastic devotion to his profession, he studied every tissue and every organ, and may in fact be said to have created this branch of anatomy; for MALACARNE, who perhaps first established a distinction between different kinds or systems of organs, did comparatively little with regard to their minute structure. Much, however, as we owe to Bichat, his work, it must be confessed, has been left far behind in the progress of modern science; while the enthusiasm of his character led him to the adoption of numerous erroneous opinions, which nevertheless are supported by such a specious, and often eloquent, train of reasoning, as to render them dangerous. Now the object of M. Beclard is to supply the deficiencies of Bichat, and to rectify his errors; presenting us, in short, with an accurate view of the present state of this branch of anatomy.

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* *Oversigt over det* K. D. *Vid. Selskabs forhandlinger*, 1823.

† *Elemens d'Anatomie General, ou Description de tous les Genres d'Organes qui composent le Corps Humain.* Par P. A. BECLARD D'ANGERS, Professeur d'Anatomie à la Faculté de Medecine de Paris.—Paris, 1823.

In an introduction of some length, the author gives a general outline of comparative anatomy and physiology, particularly with reference to those animals whose organization most resembles that of man. The general structure of the human body is minutely considered, and more attention given to the history of the fluids than is customary in anatomical works, while the description of each tissue is followed by an account of its pathology. There is likewise a chapter on accidental productions,—such as adventitious fluids, concretions, and tissues; and foreign bodies having life, as intestinal worms and parasitic animals. The work is written in a very compressed style, and contains in one volume a distinct account of many important subjects.

The first volume of an extensive system of Comparative Anatomy* was published a few years ago in Germany, which seems to be little known in this country. It is by the pen of MECKEL, the distinguished professor of anatomy and physiology at the University of Halle. The work commences with the consideration of general anatomy, in which a great deal of fanciful speculation is displayed: thus, we have four chapters containing a general exposition of the laws of formation,—the indication of the essential characters of the animal body,—the development of the first law of formation, called law of variety,—and lastly is considered the second law of formation, called that of analogy or reduction. The characters regarded as proper to give an idea of the animal frame are—1, the external form; 2, the internal structure; 3, the relative situation of parts; 4, the degree of density, or consistence; 5, the number of parts; 6, their volume; 7, their colour. To complete the idea of the animal form, the author adds to the characters we have mentioned, a description of the nature of the organs, their vital properties and their functions. Having pointed out these characters, he passes in review the differences of organization, from the simplest zoophyte up to the most perfect animal; and then examines the different divisions of the animal kingdom, adopted from the time of Aristotle to the present day, terminating with his own, which is as follows:—1, Protozois; 2, Echidermata; 3, Annelides; 4, Insecta; 5, Arachnides; 6, Crustaceæ; 7, Cirrhipedes; 8, Molluscæ; 9, Pisces; 10, Reptilia; 11, Aves; and 12, Mammiferæ.

M. Meckel regards it as of essential importance to found zoological systems on general organization, and not to adopt individual organs as the principle of classification. He combats the opinion of M. Geoffroy, according to whom even insects and the crustaceæ are endowed with skeletons; and refutes the speculations which tend to overthrow the division of animals into vertebrated and non-vertebrated. With regard to the Cephalopodes, which have generally been ranged with the Molluscæ, he places them as an intermediate section between the vertebrated and non-vertebrated animals, on account of the rudiments of a spinal column and bones of the extremities presented by these animals. He attempts to reduce all animal forms, regular and anomalous, to one

* *System der Vergleichenden Anatomie.* Von J. F. MECKEL, &c. &c.—Halle, 1821.

primitive type. We do not know whether or not this work has proceeded further than the volume of which we have given a sketch.

A very elaborate dissertation* has been published by Dr. TREVIRANUS, of Bremen, on the differences between the form, shape, and situation of the various parts of the *brain* in different classes of animals. To this we must refer any of our readers who may be interested in the subject, as it is impossible to give any connected view of the author's minute descriptions, without extracts far more lengthy than our limits admit of.

The *surgical anatomy of the arteries* has been made the subject of a distinct work by Mr. HARRISON, of Dublin,† in which the descriptions are interwoven with practical and physiological remarks. All the arterial branches, of any importance in a practical point of view, are described, with reference to their coverings, the parts they lie upon, and those which they accompany; while the very minute and superficial ramifications are disregarded. This method seems to us judicious, as it relieves the memory from an unnecessary load; and the work itself would probably have been an useful addition to the dissecting-room, had there not already been so many excellent Manuals of this kind.

We have likewise to notice a translation of the General Anatomy of BICHAT, of which only the first part (including two volumes) has yet appeared;‡ and an Introduction to Anatomy and Physiology, by Mr. SANDWITH, in which the descriptions are adapted to the general reader, and the plan of which approaches more to the anatomical part of PALEY's Natural Theology than any other work with which we are acquainted.§

Connected with the subject of anatomy, it may not be irrelevant to mention here that a very favourable account is given of what are called *anatomical imitations*, executed with great zeal and perseverance by M. AUZOUX. These pieces of machinery are so contrived that all the surfaces can be laid bare, as in dissection, from the most superficial parts to those most deeply seated. Each muscle and each organ can be separately removed, and again replaced; each vessel and nerve may be traced from its origin to its minute ramifications; and openings made in the viscera allow their internal structure to be studied. All the characters on which anatomical knowledge depend, as situation, extent,

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* *Sur les Differences qui existent relativement a la Forme et a la Situation des Parties du Cerveau, dans les diverses Classes du Regne Animal.* Par le Docteur G. R. TREVIRANUS, Professeur a Breme.—Journal Complementaire, Mai 1824.

† *The Surgical Anatomy of the Arteries of the Human Body, designed for the Use of Students in the Dissecting-room.* By ROBERT HARRISON, A.B. T.C.D. &c.—Dublin, 1824.

‡ *General Anatomy, applied to Physiology and the Practice of Medicine, by* X. BICHAT. *Translated from the last French Edition, by* CONSTANT COFFYN. *Revised and corrected by* GEORGE CALVERT, Esq. &c.—London, 1824.

§ *An Introduction to Anatomy and Physiology, for the Use of Medical Students, &c.* By THOMAS SANDWITH, Surgeon.—London, 1824.

form, attachments, direction, colour, the relations of muscles, the origin, course, and distribution of blood-vessels and nerves, and the disposition of the viscera, are all said to be executed with great fidelity. M. Auzoux is said to employ, in the construction of these machines, a sort of paste which combines solidity with elasticity, which enables him to represent parts which are extremely delicate, as well as those which are of large size,—which resists time and use, and is not liable to be attacked by insects. It is capable of being run into moulds, by which any number of casts may be obtained.*

In the department of PHYSIOLOGY, we find little on which to congratulate ourselves. It would be unreasonable, indeed, to expect that each short period which intervenes between these Historical Retrospects should give birth to any brilliant discovery; but what we lament is, to perceive the danger which physiology at present runs of being brought into utter disrepute, from the manner in which it is cultivated by our continental neighbours, who seem unable to discover that the multiplication of experiments, without some rational object, can never contribute to the advancement of science. Too many of these which we find recorded in the foreign Journals relate to matters of mere curiosity, while others concern facts which we know sufficiently well without any fresh illustration. But the French will not believe that we see with our eyes, or hear with our ears, unless it be proved by experiment. Thus a rage for experiments is the prevailing mania, and every youth who would acquire a name gets him a supply of dogs, cats, rabbits, and guinea pigs, in order to ascertain—no matter what. "Voici un chien, qu'est ce qu'il faut faire." Accident or the whim of the moment seems often to dictate the particular cruelty to which the animal is to be subjected, and the *experiments* are forthwith detailed with all possible minuteness of description, and all the affectation of scientific precision. The next step towards becoming a physiologist of repute is to lay this account before the Institute, a committee of which is appointed to report upon it, and accordingly do report, that it is very clever and very learned; that the author is an ornament to science and an honour to France. Those who are acquainted with the aspect which experimental physiology has lately assumed in that country, will be sensible that this picture is not too highly coloured: indeed, it is quite extraordinary to see with what facility the approbation of various learned bodies in Paris has recently been bestowed upon dissertations the most directly contradictory of each other. We beg not to be misunderstood: it is not to well-directed experiments, instituted to ascertain important objects, that we object, but only to such as we have above alluded to. Viewing the matter in this light, our readers will excuse us if we decline to recapitulate *all* the discoveries recently made by slicing away portions of the brain and cerebellum,—the mode of investigating the functions of the nervous system at present in fashion. Such, however, as appear worthy of attention we shall relate.

Since our last Historical Retrospect, we find many new volunteers in the

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* *Journal Universal des Sciences Medicales*, 95 cahier.

ranks of those who have devoted their attention to the nervous system, prosecuting and extending the experiments on different portions of the brain, after the manner particularly practised by ROLANDO in 1809, and recently revived in France by M. FLOURENS; an account of whose investigations has been given in the preceding volumes of this Journal. One of these gentlemen seems to have surpassed the others in the refinement of his speculations: we allude to M. BAILLY; and, in giving a sketch of his views, they may be taken as a general illustration of the manner in which the subject is at present cultivated.

The principal results of his Essay are certain anatomical facts and general conclusions therefrom, relative to the organization and functions of the nervous system. Among the former we find a particular account of the tubercula quadrigemina in fishes. These organs, which have hitherto been regarded as belonging to one individual function, are composed of two systems entirely distinct from each other in the direction of their fibres, in their relation to the neighbouring parts, in their distribution, their commissures, and functions. One of these systems is formed by transverse fibres, originating in general from the striated body, which is itself the termination of one of the bands of the spinal cord. These fibres pursue their course upwards and inwards, and all meet on the median line with those of the opposite side, where they communicate by means of other transverse bands, constituting commissures. The other system is external to the preceding, and formed of the fibres of the optic nerve, which dilate into a nervous band, covering the inner part described above. The fibres of this external plate are in general longitudinally oblique. In order to attain their destination, they run downwards, crossing the fibres of the internal band, and go to form the optic nerve. The commissure of this part is found, in the greater number of animals, behind the optic nerve, beneath which it is sometimes hid. M. Bailly first discovered it in the buffalo, and afterwards in various others. This commissure runs in the inferior class to the posterior part of the tubercula quadrigemina, of which it constitutes in some sort the external and posterior margin: it belongs only to the external, and in no degree to the internal tubercle, which, as already mentioned, has its own peculiar commissure. Thus each tubercle has its commissure, that of the internal being above, and that of the external being situated below. This commissure has served the author with the means of determining the use of a nervous fasciculus, which, although pointed out by various writers, had never been referred to any particular system,—that, namely, which goes from the posterior portion of the tubercula quadrigemina to the corpus geniculatum externum This, according to M. Bailly, is the termination of the commissure of the optic nerves in the mammalia, and the following are the grounds on which this opinion is founded:—

The tubercula quadrigemina being simple in the inferior classes,—that is, only consisting of one lobe on either side,—are subdivided into many parts, which in the mammalia have received different names: thus the anterior and posterior tubercula quadrigemina, the corpus geniculatum, both external and internal, are only portions of the optic lobe of inferior animals. The commissure of the fibres of the optic nerve,

which runs to the posterior part of this lobe in the inferior classes, is visible in the whole of its extent; but, in mammiferous animals, one portion of these optic lobes is situated precisely on the course of this commissure,—viz. the corpus geniculatum externum. The commissure in question is thus interrupted but in appearance only, for it is continued underneath, and at length ends in the fasciculus above mentioned, which runs from the posterior part of the tubercles to the corpus geniculatum. Now, as, in the inferior classes of animals, the commissure of the optic nerves goes to the posterior part of the tubercula quadrigemina,—and as, in the mammalia, it runs to the posterior tubercle,—we have, in this distribution, a new proof that the posterior corpus quadrigeminum is the same organ as the anterior, from which it is only accidentally separated by a furrow, which is not to be found in the inferior animals.

M. Bailly next shows the singular connexion between the olfactory and optic nerves: the former one covered by the hemispheres of the brain, the ventricle of which is, in some measure, a continuation of the cavity of these nerves; the latter, instead of being covered, do themselves cover the expansions analogous to the hemispheres; for he considers the internal division of the tubercula quadrigemina in this light. Another proof of resemblance consists in the presence of a commissure, which these two nerves possess.

The anterior commissure has been described as simple, going to the middle lobes in man, and to the olfactory nerves in other animals. M. Bailly has discovered that a distinction exists between the herbivorous and carnivorous animals; for, in the latter, this commissure is double, one part going to the middle lobes, and the other to the olfactory nerves. The fifth pair has never been described as possessing a commissure: M. Bailly, however, has found one in the lamna *(lamna cornubica)*, and has likewise described a particular conformation of the anterior lobes of the hemispheres in birds, and probably applicable to other animals. These convolutions, being independent of the pyramidal eminences which cross each other at the summit, cannot afford the same phenomenon of impressions communicated to the opposite side.

M. Bailly is of opinion that the vertebral canal contains not only the origin of nerves of sensation and motion, but likewise that there are in it organs analogous to the hemispheres, and which are the seat of volition. He lays down the following propositions:—1. Every segment, every ring, every vertebra, of an animal, contains the same nervous elements throughout the whole length of the animal. 2. In all the vertebræ of the neck and back, there are nerves of sensation, motion, and digestion; and an intellectual system besides, to receive the impressions of these nerves, in order to produce consequent determinations.

In the head, this intellectual system is constituted by the brain. In the vertebral canal, it is imagined by M. Bailly to be composed of *eight* longitudinal cords, which are described by him, and which terminate anteriorly, each having a distinct development. Thus the inferior median cord, which is continuous with the pyramidal eminence, terminates anteriorly in the hemispheres of the brain. The inferior lateral cord terminates in the internal fold of the tubercula quadrigemina; so that, according to M. Bailly, it is a new organ of intellect, and not one of sensation.

The superior lateral cord terminates in the cerebellum. The superior median cord terminates in the lateral parts of the medulla oblongata. This last organ, of which the greatest development takes place in cartilaginous fishes, is recognized by the author as analogous to the cineritious folds existing in the mammalia. Thus, the hemispheres of the brain, the internal fold of the tubercula quadrigemina, the cerebellum, and the lateral convolutions of the medulla, are organs analogous as to their intellectual functions, and must necessarily be exercised in the eight longitudinal cords of the spinal marrow, which are continuations from them.

The swellings which the spinal marrow presents in different points of its length are not participated by the intellectual cords. The spinal nerves have two origins, which embrace the intellectual cords between them. The same disposition occurs in the nerves of the head, which only differ from the other in the superficial changes produced by the development of the intellectual cords of the head. The author shows that the anatomy of the human body, having preceded that of other animals, has thus influenced the names given to different parts, by which, different names have been given to the different roots of the same nerve: thus the third and fourth pairs, in man, issue from the head separately, but in the inferior classes of animals only constitute one pair. So that, if we are to consider as distinct those nerves whose roots do not issue by the same foramen, we ought to regard each vertebral pair as composed of two different nerves, since, in some cartilaginous fishes, each fasciculus of the anterior origin issues by a different hole from those of the posterior.

Each vertebral pair of nerves communicates externally with a ganglion of the great sympathetic. M. Bailly has found the same correspondence between the cerebral nerves and other ganglia, such as the ophthalmic, the spheno-palatin, naso-palatin, &c., which are to the cerebral nerves what the ganglions of the great sympathetic are to those of the spine. Each vertebral pair furnishes nerves of respiration, or communicates with them. The same disposition obtains with respect to the cerebral pairs. The author considers the fourth and sixth pairs as nerves of respiration of the eye. Each vertebral pair is connected, by one of its extremities, with the intellectual system: the same with regard to the cerebral nerves.

Radiated animals have been considered as formed on a different plan from the articulated or vertebrated; the author, however, finds the same radiated disposition in the spinal marrow, which, composed of eight cords circularly disposed, exactly resembles the ganglionic circle of polypi, &c. In these animals the ganglions have a globular form, while in the vertebrated animals they are elongated into cords; the difference being in their form, and not in their nature.

Some experiments upon turtles tend to confirm the opinion that the author has advanced on the functions of the longitudinal cords of the spinal marrow, which he has designated by the name of *intellectual*, to express their analogy with those of the brain. He asserts that experiments agree with anatomy in pointing out that these cords partake with the brain the privilege of being the seat of volition and determination,

and having the power to command the movements of consciousness and intention; a property which heretofore has been regarded as belonging exclusively to the brain.*

The Physiological Journal for October contains the result of some researches made by the editor, with regard to *the functions of the corpora striata and tubercula quadrigemina.* MAGENDIE had pointed out, in a preceding paper, that, when the hemispheres of the brain are removed, the animal begins to run with great activity. In prosecuting his experiments further, he found that it was not the loss of the entire mass of the hemispheres which gave rise to this effect, but only the loss of the corpora striata; for, if the two hemispheres, with the corpus callosum and the anterior lobes, be removed from a young rabbit, without touching the corpora striata, this running forwards does not take place, nor is the gait of the animal changed. If only one corpus striatum be removed, the motions remain free, the animal directing them, and stopping at pleasure; but, as soon as both these bodies are cut away, he rushes forwards, as if impelled by some irresistible power. Magendie had formerly stated, that the removal of the optic thalami produced much more considerable injury than the loss of the corpora striata; animals so treated losing even the power of standing. These effects, it now appears, result from a vertical incision behind the optic thalami: in making another behind the tubercula quadrigemina, the members which were previously apart are drawn together; but, to secure this effect, it is necessary that the medullary stratum lying on the basis of the cranium be intersected.

It would appear from these experiments, that the energies connected with motion reside in the white medullary fibres, which radiate from the corpora pyramidalia towards the hemispheres. The sensibility of this part, however, appears to be less than that of the upper medullary stratum; the distinction of the two properties, which is so evident in the spinal cord, may be recognized even in the medulla oblongata.

M. Magendie has long been in the habit of showing, in his Course, that a wound involving both optic thalami occasions loss of sight; and, with a view of ascertaining whether the optic nerves cross, he renders the cornea of one eye opaque, and after a certain time examines the parts within the head. In birds, he has always observed the nerves of the blind eye wasted, and that this wasting extends even to the optic thalamus of the opposite side; the thalamus having shrunk in size, and the nerve lost its medullary matter. Nothing analogous, however, has resulted in mammiferous animals, even at the end of twelve months after the loss of an eye; in such cases, the nerve being wasted only anterior to the crossing. It is said that there exists in the Museum of Comparative Anatomy at Paris, a specimen in which the wasting had extended even to the thalamus of the opposite side, in a horse blind of one eye.†

M. DESMOULINS has likewise given the result of some observations,

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* *Bulletin des Sciences Medicales.*

† *Journal de Physiologie Exper.* Octobre 1823.

which tend to confirm those of M. Magendie. In a falcon which had suffered from ophthalmia, ending in suppuration, with thickening and opacity of the cornea, both retinæ were smooth, which induced M. Desmoulins to regard the wasting of the optic nerve, and the disappearance of the folds of the retina, as the simultaneous effect of the atrophy caused by the inactive state of the eye.* He enumerates various facts recorded by MORGAGNI, SŒMMERING, WROLIK, and others, tending to prove that the effect of blindness is to produce wasting of the optic nerves and thalami.

It would be alike tedious and useless to recapitulate all that has been advanced with regard to the inquiry which has recently occupied the French almost exclusively,—namely, to determine the function of each portion of the nervous system. According to M. FLOURENS, the hemispheres of the brain are the seat of sensation and volition; the spinal marrow and nerves give rise to motion; the cerebellum governs the motive powers; while the medulla oblongata presides over the operations of instinct. All these positions are founded on experiments supposed to be incontrovertible; nevertheless, they are repeated by others with results entirely different. SERRES maintains, that injury or removal of the corpora striata paralyses the lower extremities, and that the optic thalami command the superior members. MAGENDIE again cuts away the cerebral hemispheres and corpora striata, and the animal, as we have mentioned, runs straight forward by an irresistible impulse.—The cerebellum, too, is the subject of much contrariety. Some (FLOURENS, &c.) tell us that it is the regulator of all motion; others (ROLANDO, &c.) that it is not the regulator, but the actual portion of the system whence proceeds the power of motion; and a third set (FODERA, &c.) request us to believe that it is the seat of sensibility, and especially of sexual desire. In short, the whole subject remains at present a tissue of jarring opinions and contradictory experiments.†

Dr. BELLINGERI, of Turin, lately read to the Royal Society of that city, a Memoir on the *functions of certain nerves, particularly those of the spine.*‡ His experiments were performed on sheep and horses, and the following are the most important results. The posterior roots of the lumbar and sacral nerves communicate the power of extension to the inferior extremities in quadrupeds; the anterior roots of the same nerves, on the contrary, only give rise to the movements of flexion; the posterior roots alone preside over the sense of touch; the white substance of the spinal cord, and nervous filaments arising therefrom, are destined for movement; the grey matter, on the contrary, and the nerves arising from it, are the organs of touch.

Baron LARREY has likewise given some share of his attention to the nerves, although in a very different way from the professed

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* Note in the *Arch. Gen. de Medecine*, tom. iii.

† While this sheet was passing the press, we had an opportunity to become acquainted with further results of M. MAGENDIE's researches, and to witness many of his experiments: of these, an account will be found in another part of this Number.

‡ *Annali Universali di Medicina*, 1824.

experimentalists. The observations of this veteran surgeon have been principally made on the human body, during surgical operations undertaken in consequence of wounds received in battle; and any facts thus indirectly ascertained are, at least, as valuable as those brought together by the express institution of experiments. He has frequently observed* that the division of the nerves of the brain causes acute, but momentary, pain; that the cut extremities, instead of retracting, seem rather to become a little elongated, and to touch each other; whilst all the other soft parts, when recently divided, retract and separate from each other with more or less force; that the cut ends of nerves swell, or bulge out, to a certain distance, and form at their summit a rounded unequal eminence, from whence arise very slender filaments, (doubtless formed by the neurilema,) which unite with the surrounding parts, and lose themselves in the cicatrices, which become very sensible. When these nervous extremities are exposed to the contact of the atmosphere, they inflame, and become covered with fleshy granulations formed by the vessels of the neurilema; and the parts thus inflamed are extremely sensible and painful, so that they cannot be touched without exciting convulsions. When the two extremities of a divided nerve are reunited by spontaneous cicatrization, the nerve, as is well known, again transmits the stimulus necessary to restore the functions of the part to which it is distributed. According to M. Larrey, this communication is not effected by means of any anastomosis, but each nervous filament which enters into the formation of a nerve fulfils a certain specific function, which cannot be supplied by any other; thus resembling the metallic wires which form the common cord of the electrical telegraph of SŒMMERING.

These statements, however, are not peculiar to M. Larrey; but a circumstance follows which we believe is not generally known,—it is that two distinct nerves, which have been divided during an amputation, may unite together in the stump end to end. He amputated the right arm of a soldier, named Glass, in 1821, for scrofulous ulcers and caries of the bones of the fore-arm. The patient died in the summer of 1823, of tubercular phthisis; and, on examining the stump, it was found that the cicatrix, which had become linear, was depressed in the centre, and appeared to have formed vascular connexions with all the subjacent parts, including the periosteum of the bone. This external envelope having been removed by careful dissection, it was found that the cut end of the bone was become thin and rounded, the medullary cavity being almost obliterated; the humeral artery and vein were united at their extremity, and their cavity destroyed to the extent of some lines. The trunks of the median and external cutaneous nerves were united end to end by their divided extremities; and an incision made through the cicatrix afforded no trace of intervening cellular texture, the substance of the two nerves appearing to be blended together, like natural anastomoses formed by the sides of certain nervous trunks which have separate destinations. The two trunks of the brachial plexus, which

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* *Notice sur quelques Phenomenes observés dans la Lesion des Nerfs, et dans leur Cicatrization.* Par M. le BARON LARREY.—(Revue Medicale, Mars.)

runs to the posterior part of the arm and fore-arm, were united in a similar manner.

A case of *inflammation of the spinal marrow, connected with disease of the kidneys,* related by Dr. JONES, possesses some interest from its relation to the recent experiments on the functions of the anterior and posterior roots of the spinal nerves. The power of moving the limbs was but little affected, but there was considerable numbness and loss of sensation, affecting the back especially. "Now the examination of the spinal cord shewed that, though the sheath, and the cellular substance between it and the inside of the vertebræ, was most inflamed at its anterior part, the enlarged blood-vessels exercised most pressure at the posterior and lateral parts."* It is almost unnecessary to remark, that this account, so far as it goes, is corroborative of the doctrines of Mr. CHARLES BELL and MAGENDIE.

In our last Proëmium, we mentioned the observations made by M. DESMOULINS on the peculiarities of the brain in fishes: we have now to lay before our readers some further researches, by the same physiologist, on *the organs of vision* in different classes of animals.† Careful dissection has given M. Desmoulins occasion to remark a folding of the optic nerve, and of the retina itself, in eight different species of fish, and that those possessed of this arrangement are gifted with more energetic vision than the others. From this disposition of the retina it follows that, when unfolded, it occupies a much larger extent than the membrane which envelops it. Further researches, made on those birds whose sight is most piercing, confirm the results already mentioned, and convert them into a general law. In some of the eagle and vulture species, the retina is folded on itself in such a way as to resemble the meridian lines of a sphere; the folds being deeper and more distinct in the eagle than in the vulture. In these birds, and in some others, the optic nerve is surrounded by a fibrous sheath, which does not adhere to it, but is continuous with the sclerotic coat and the dura mater. In the curlew there is a slight puckering, by which an increase of surface is gained, equal to the tenth of the whole sphere. In the diver *(colymbus minor)* the optic nerves are not longer than the fourth-part of the diameter of the eye; the retina is smooth throughout the posterior fourth of the sphere, and very much puckered throughout the rest of it; so that, if unfolded, it would occupy double the extent of the spherical segment where they are situated. In the mallard, the turkey, and some others, the retina is smooth as in man. It does not appear, then, that the folding of the optic nerve necessarily coincides with that of the retina.

After demonstrating that there is a constant coincidence between the

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* *Case of Inflammation of the Spinal Cord, combined with Inflammation and Suppuration of the Right Kidney; with the Appearances after Death.* By WILLIAM JONES, M.D. &c.—(Edinburgh Med. and Surg. Journal, April 1824.)

† *Memoir sur le Rapport qu'a l'etendue des Surfaces de la Retine et du Nerf Optique des Viseaux avec l'Energie et la Portée de leur Vue.* Par M. A. DESMOULINS, D.M.P.—(Journal de Physiologie Exper.)

energy of vision and the proportional extent of surface in the retina and optic nerve, the author shows that this anatomical disposition has a constant relation to the size of the tubercula quadrigemina, in birds and fishes. M. FLOURENS considers this portion of the brain as merely the conductor of vision, the cerebral lobe being the boundary of sensation and the site of its perception. On the other hand, according to M. Desmoulins, in those animals in which the cerebral lobes are either wanting, or of which a rudiment only exists, the brain is not the seat of the sensation; and thus, in fishes, he regards the optic lobe, or tubercula quadrigemina, as the seat of vision. He likewise impugns the accuracy of Flourens on another point,—viz. in holding the cerebellum to be the balancer and regulator of determinate movements, as this function exists in animals destitute of the organ in question *(les batraciens)*. CUVIER says that, in these animals, it is only a small triangular body. Now, M. Flourens talks in his Memoir of having removed *both lobes;* which is regarded as a proof that he mistook the part.

Some important observations have likewise been made by M. Desmoulins with regard to *the coloured and reflecting surfaces of the choroid, and the corresponding degrees of perfection in vision.* In cats and some other mammalia, in the sturgeon and various fishes, the whole concavity of the choroid is uniformly coloured of a pearly white, with metallic reflections, which in some species are not inferior in lustre to polished silver. In some *(squales)*, a zone of the choroid, touching the iris, is black; but its situation is such as to prevent it from receiving any image or ray of light. Thus it appears that, in various mammiferous animals, and in certain fishes, there is not the smallest black spot on the posterior part of the eye; and that in the sturgeon, and some others, the inner surface of the iris reflects the rays of light. On the other hand, in the hedgehog and the owl, both nocturnal animals, the concavity of the choroid is either black or brown. Those animals which have the choroid coloured generally have the pupil placed longitudinally, of which no example is to be found where the choroid is black or brown: neither does M. Desmoulins suppose that any animal, really a nyctalope, has the choroid black. In short, the idea of this physiologist is, that the coloured choroid acts by reflecting the rays in such a manner as to produce a double image; thus resembling the effect of the folds existing in birds, although the multiplication takes place to a much less extent, and depends upon a mechanism entirely different. In the sturgeon, the two contrivances (of a reflecting and folded choroid) are united at the inferior extremity of the eye.

In our Number for May, we gave an extended account of Dr. KELLIE's paper on *the circulation in the brain,* and we have now to notice a very interesting communication on the same subject, by Dr. CARSON, of Liverpool.* This gentleman adopts the opinion (concerning the accuracy of which, we conceive, little doubt can be entertained,) that, as the limits of the cranium are fixed, the quantity of its

* *On the Circulation of the Blood in the Head.* By JAMES CARSON, M.D. Liverpool.—(Edinburgh Med. and Surg. Journal, April 1824.)

actual contents must be always the same, although many variations may occur with respect to the relative proportion of fluid and solid parts. It is obvious, however, that, as the substance of the brain cannot during life undergo any very sudden change, so these variations must principally regard the fluid contents,—that is, the relative quantities of blood in the vessels, and of water in the ventricles. Neither, however, can this last be regarded as subject to much change in the healthy state of the body; and, if we thus suppose two of the three constituent parts of the contents of the cranium remain the same, by what means is the alternate entrance of the third into the brain, and its removal therefrom, to be accomplished? To the solution of this difficulty, Dr. Carson applies the resiliency of the lungs, a principle of which he has formerly made such ingenious use. He supposes a portion of the atmospheric pressure to be removed from the blood, at the ends of the sinuses communicating with the veins outside the neck, by the dilatation of the heart and the resiliency of the lungs having a constant tendency to increase the capacity of the veins within the thorax. But this abstracting power, although generally aided by gravity, is insufficient to suck out the blood from the head, except at the moment when the arteries, by their contraction, are ready to introduce a quantity of blood into the head, equal to that which the veins are endeavouring to abstract, and thus the blood is equally circulated through the whole head. It has been common to attribute the phenomenon of the pulsation so frequently observed in the jugular veins, to the impulse communicated to them by the contiguous arteries; but, according to the view just given, a very different explanation presents itself: for, as it is contended that the arteries convey the blood to the head in synchronous jets, and that at the same instant, and then only, the veins are enabled to abstract it, so it is obvious that a succession of currents must pass through the veins, whose alternate dilatation and collapse give rise to the phenomena in question.

These views, as well as those of Dr. Kellie above alluded to, suppose the quantity of blood within the cranium to continue always the same, while the other contents remain unaltered. We now come to a different proposition. It is generally admitted that, in particular diseases, the substance of the brain is more or less wasted; and this must give rise to an increase of one or both of the other contents of the encephalon,—probably, for the most part, to the latter. Supposing the blood to be increased in quantity, it is obvious that there must be a limit to this accumulation, as the vessels cannot be supposed capable of unlimited distention. Now, the object of Dr. Carson is to show that the use of the ventricles is to guard against this danger, by affording receptacles for water, by which the space that would otherwise be a void is conveniently filled up, without rendering it necessary for the vessels to become too much enlarged.

"On the dissection of bodies reduced to great emaciation by disease," says Dr. Carson, "the vessels of the head are found to be turgid, the substance of the brain to be soft and to contain an unusual quantity of blood, and the ventricles to be greatly distended with water. Sometimes, in such cases, the quantity of water contained in the ventricles is very consider-

able; ten ounces is by no means uncommon. Suppose there had existed no receptacles for water, such as the ventricles, and the brain to have been wasted to that degree by which room was afforded for the admission of ten ounces of water into the encephalon, the blood-vessels of the head must necessarily have been loaded with ten ounces of blood, in addition to the quantity which they already possessed, and by which they appear to have been already too much distended. Long before they could have been distended to the capacity necessary for the admission of so great a quantity of blood, their coats must have given way, and a fatal hemorrhage ensued; or, at all events, they must have been too much surcharged for the performance of their functions. Hence, we readily perceive the important uses of the ventricles. By becoming the receptacles of a mild fluid, they, in certain circumstances, prevent the blood-vessels from being over-distended. By their greater or less expansion, they become the grand regulators of the circulation of the blood through the head. Water in the ventricles, in such circumstances, instead of being considered a disease, is in reality the great remedy provided by nature for the preservation of life, in situations in which it could not otherwise exist. It is the defence set up by nature for the protection of the breaches or weak points which may exist in this part of her works.

"The ventricles of the brain, in consequence of their irregular course, are admirably situate for enabling the substance of the brain to assume that variety of position necessary, as circumstances alter, to give due support to the vessels of the head, without sustaining at any point a disproportionate distention. But, to perceive this sufficiently, the brain itself must be examined."

Those views of the subject appear to us highly interesting and satisfactory. We think it is extremely probable that, when any portion of the brain is removed, it may give rise to synchronous and corresponding distention of the blood-vessels; and that these, being thus distended to a certain extent, and for a certain time, may relieve themselves by serous effusion into the ventricles. So, on the contrary, if the quantity of the solid substance of the brain be increased, little water will be found in the ventricles; the space assigned to the blood-vessels is encroached upon, it may be, to such an extent as not to leave sufficient room for its circulation: hence, though unable to gain admission, the blood is driven to the external parts of the head, and gives rise to that redness of the face and appearance of fullness about the head which characterizes those predisposed to apoplectic seizure.

Our countryman, Dr. EDWARDS, who has become naturalized in France, and whose name we have frequently had occasion to mention with respect, has lately published an extensive work upon *the influence of physical agents upon animal bodies,* by which appellation he designates the air, water, temperature, light, and electricity.* Those causes, in some of their modifications, exert a silent but constant agency, and the method adopted to measure the effects thus produced was that of

* *De l'Influence des Agens Physiques sur la Vie.* Par W. F. EDWARDS, D.M. &c. &c.—Paris, 1824.

experiment upon each of the four classes of vertebrated animals.—Among these physical agents, the atmosphere is most universal in its operation, and most important in its effects; yet there appears reason to believe that, much as the phenomena connected with it have been studied, from the time of GOODWIN to the present day, too great importance has been attached to the relation subsisting between the atmosphere and the lungs, or, rather, this alone has been studied, while the effects resulting from the influence of the medium in which an animal is placed upon the surface of the body, has until lately been nearly overlooked. In some classes of animals, indeed, the influence of this agency is acknowledged; but its existence does not seem to be confined to those modifications of life which prevail in the species which constitute the lower ranks of creation,—at least, if we admit the theory of M. GEOFFROY respecting the respiration of the fœtus. The influence of the medium, independently of respiration, was ascertained by Dr. Edwards, by an ingenious application of the wonderful property possessed by reptiles of retaining the free exercise of sense and voluntary motion for a certain period after the excision of the heart. By this operation, the circulation is arrested, and the function of respiration ceases, as a necessary consequence. The result of this is to leave only the nervous and muscular systems in operation. If, when this has been done, some animals be placed in air, and others in water, the difference between the period during which life is prolonged under these two circumstances will indicate the respective influence of the media upon the nervous and muscular systems, *independently of respiration and circulation.*

Such was the plan adopted by Dr. Edwards. He cut out the hearts of four salamanders, two of which were exposed to the air, and two placed in water, which had been freed from air by boiling: for a short time they were all equally lively, but their activity gradually diminished, and was only manifested at long intervals. At the end of four or five hours, those in the water appeared to be dead, but they still moved on being pinched: one died at the end of eight, and the other of nine hours. Those which had been left in the air, on the contrary, lived twenty-four and twenty-six hours. These experiments were frequently repeated, as well on salamanders as on frogs, and with similar results, except that, in these latter animals, the period during which they survived in the air was not so much greater.

The difference in the effects of the media was further illustrated, by placing a frog, under the circumstances above mentioned, in water, and, when it no longer gave any sign of life, removing it into the air, by which it recovered and began to move. This experiment was likewise reversed.

Another modification of these experiments consisted in preventing respiration by tying pieces of bladder over the heads of frogs, so as to produce strangulation. They were paralyzed at first, but gradually recovered their strength to a certain extent, and lived from one to five days: while those immersed in water, under similar circumstances, died at the end of ten or twelve hours. It was further ascertained, by inclosing frogs, with the head thus enveloped, in vases of atmospheric air,

that a portion of carbonic acid was formed, thus properly constituting cutaneous respiration. This had been previously ascertained by SPALANZANI, but in a less satisfactory manner, as there were sources of error in his experiments, which it is unnecessary here to detail.

A very curious question has received conclusive elucidation from the investigations of Dr. Edwards: we allude to the singular fact of certain animals, particularly toads, remaining alive for indefinite periods, although enclosed in solid bodies. Most of our readers are probably aware of the famous experiment of HERISSANT, who enclosed three toads in boxes sealed with plaster; two of which were found alive at the end of eighteen months. The account of this experiment is not very satisfactory in its details, as no mention is made either of the size or materials of the boxes employed; and there is reason to believe that a certain portion of air was present in them. Dr. Edwards, in order to guard against these objections, took boxes about four inches square, and, having put some plaster in the bottom, he placed the toads in them, and, surrounding them on all sides with plaster, shut and secured the boxes. The circumstance to be ascertained was—whether these reptiles, deprived of air by the contact of a solid body, or by immersion in water, would survive longest; and it is sufficient at present to remark, that they lived much longer in the plaster than in water. A fact sufficiently remarkable, but what appears more extraordinary still, is that they lived longer when enclosed in a solid body than in air. Four frogs were confined in a dry jug, and an equal number were placed in dry sand: the third day, all those confined in air were dead, except one, while all those enclosed in sand were alive, except one; from which it would appear, not merely that these reptiles can live when surrounded by solid bodies, but that placing them in this situation is a means of prolonging their existence; a conclusion which is in accordance with those well-authenticated narratives of animals of this class having been found in the centre of solid masses, where they must have been enclosed during periods concerning the duration of which it would be in vain for us to indulge in conjecture.

That the sand employed in the last-mentioned experiment contained air is obvious, and that the plaster was pervious to air was proved by the following experiment:—An open tube was corked with wet plaster to the extent of an inch; after it was dried, more plaster was applied, to cover any imperceptible apertures; the tube was then filled with mercury, and inverted over a vessel of the same: the air entered through the plaster, and made the quicksilver sink in the tube. But as it might be said that, although some air passed through the plaster, yet enough to sustain life could not be supposed to find its way through so dense a body, toads and salamanders were enclosed as before, and the boxes buried in water and quicksilver: they now died as soon as when merely immersed without any covering. It would thus appear that the fact of these reptiles living in solid bodies is not an exception to the general law, which regards air as necessary to the support of animal life. The fact of their surviving longer in plaster or sand than in air, seems to depend upon the waste by evaporation being thus lessened; it having been found, by statical experiments, that, *ceteris paribus*, a frog con-

fined in air became emaciated and shrivelled with much greater rapidity than when surrounded by solid materials; the rationale of which is too obvious to require explanation.

The influence of cutaneous respiration was further illustrated by preventing the action of the lungs. As the mouth of these animals is necessarily shut during respiration, to enable them to throw air into the lungs by a movement of deglutition, Dr. Edwards took advantage of this circumstance, by placing a piece of stick between the jaws, so as to prevent them from being closed, and retaining it in this situation by a particular apparatus. This contrivance impeded, but does not appear to have entirely arrested, the action of the lungs, and therefore the results can scarcely be regarded as satisfactory; nor the method, one proper to be adopted in repeating these experiments. A ligature was applied so as entirely to exclude the access of the air; the reptiles were placed on wet sand, and lived for a considerable time,—one of them for twenty days after complete strangulation, although, when similarly treated in water, they died in from one to three days; a result which is regarded as proving the beneficial influence of the air upon the skin. Yet another and a very important modification of this experiment consisted in the entire extirpation of the lungs, the peculiar construction of which in these animals renders it capable of being done without making an extensive wound: an incision of two or three lines in the flank permits of their extraction, while a ligature placed at their root prevents any effusion of blood. This operation was performed on three frogs, the external wounds being closed by sutures: they seemed to suffer little, and were soon as lively as before; two of them lived thirty-three days, and the other forty.

We have thought it proper to give these experiments a place in this compilation, not on account of their absolute novelty, but because they appear to us more precise than those of Spallanzani, or any previous experimentalist on this subject; and to place the importance of the skin as an organ of respiration in a very clear light, so far as regards the animals experimented upon. The work contains many interesting doctrines, particularly concerning the action of temperature and different media upon animals: almost all of these, however, were published in detached Essays, which have appeared in the French periodicals at various times during the last five or six years, and consequently the most important of them have already been noticed in this Journal.

M. Defermon has performed some experiments on different animals, with the intention of examining under what circumstances contraction of the spleen takes place, and what causes effect variations in its volume. It appears that certain substances, as strychnia, camphor, acetate of morphia, and others, which affect the nervous system, produce contraction of the spleen. When strychnia, for example, is given to a dog, this organ, as soon as the poison is absorbed, becomes rolled up in a spiral form, and exhibits powerful contractions, *(se roule en spiral et presente des contractions fort energiques.)* If camphor be given, a different species of contraction takes place; the spleen, which is generally smooth, becoming rugose, presenting eminences which

augment and diminish in volume, producing a degree of movement throughout the whole viscus. It is added, that, when the relation between the number of pulsations and respirations in the minute changes, the state of the spleen undergoes a corresponding alteration; that is, it increases or diminishes in size. Suspension of respiration likewise affects the degree of distention of the spleen. M. Defermon is engaged in the prosecution of these inquiries with a view to publication.*

One of the best of the few cases on record in which *the skin of the Negro has become white*, is related by Mr. BROWN, in the Transactions of the Medical and Chirurgical Society of Edinburgh. The change went on gradually, but progressively, and at the end of eighteen months (the period to which the report extends,) the extremities and head were of a natural white appearance; the breast, abdomen, and back speckled; and the change making regular progress.

The most important work connected with physiology which has for some time appeared in this country, is the "Elementary System" of Dr. BOSTOCK.† Independent of its intrinsic merits, it is further remarkable as the first regular Treatise on Physiology which has issued from the English press; a circumstance not a little extraordinary, when we reflect upon the active share which our countrymen have had in promoting the advancement of all the sciences connected with medicine. To supply this want has been the object of Dr. Bostock; and, in the work to which we allude, the student will find a concise but interesting account of the various theories and hypotheses which have at different times prevailed in the medical world, as well as an instructive view of the present state of our physiological knowledge. As, however, a work of this kind necessarily presents little which has not already appeared under different forms, we shall, on the present occasion, content ourselves with having thus briefly alluded to it.

MORBID ANATOMY AND PATHOLOGY.

As the anatomy of healthy structures seems naturally to precede Physiology, so Morbid Anatomy may with propriety be placed immediately before General Pathology.

A very curious example of what Dr. DUNCAN has denominated *bifid brain*, has been recorded by that gentleman in the Edinburgh Medico-Chirurgical Transactions;‡ and a circumstance which gives additional value to the description of this malformation is, that it comes from the pen of the late lamented Dr. GORDON. We have many inducements for transcribing the narrative into our pages, which, independent of its relating to a very rare species of deformity, may be regarded as a model

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* *Bulletin des Sciences Medicales*, Fevrier.

† *An Elementary System of Physiology.* By JOHN BOSTOCK, M.D. F.R.S. L.S. & H.S. M.R.S. Vol. I.—London, 1824.

‡ *Case of Hydrocephalus, with Bifid Brain.* By ANDREW DUNCAN, jun. M.D. &c. &c. *With a Description of the Malformation*, by the late JOHN GORDON, M.D. F.R.S.E. &c.—(Transactions of the Medico-Chirurg. Society of Edinburgh.)

for such reports; and to those of our readers who had the good fortune to be acquainted with Dr. Gordon, the case will be received with interest, as the posthumous production of one whose penetrating mind appeared well qualified to give a fresh impulse to the sciences he cultivated.

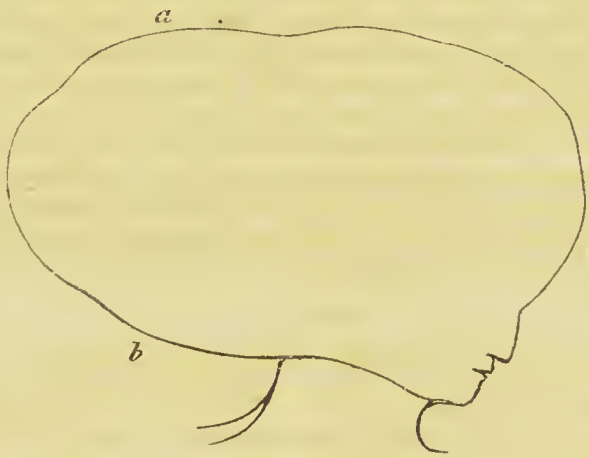
The child, which forms the subject of this paper, was a female, born hydrocephalic, and which lived seven months. All the external senses and functions appeared to be natural; she was occasionally lively, and evidently received pleasure when any one played with her; but could never sit up, on account of the weight of her head. The day after her death, the body was examined by Dr. Gordon, in the presence of Dr. Duncan and various other gentlemen, and the following description of the appearances drawn up by him:

"*Notes of the Anatomy of the Head.*

"I. *Of the Parietes of the Cranium.*

"1. *Shape and Dimensions externally.*—I measured the head, I think, in May or June. It was 29 inches round by the frontal and occipital protuberances, and 16½ over the vertex from one ear to the other ear. I did not then take any outline of its shape.

"At the dissection, the form of the head was somewhat like this—



"The dimensions were 28½ inches in its greatest circumference, and less tense than before death.

"When the back part of the head, behind *a b*, was placed between the eye and the light, it was distinctly translucent.

"2. *Parts composing the Parietes.*—A. *The Integuments.*—Had a thin appearance, and were actually thinner than natural. Large ramifications of veins were very visible in the regions of the temples and occiput. There was no appearance of granular adipose substance under the cutis vera, such as is always to be seen in children of the same age in a state of health.

"B. *The Bones.*—Both halves of the frontal bone were fully a fifth larger than they are naturally at this age, and they were separated from each other, at the anterior superior fontanelle, fully an inch and a half;

but they gradually approached each other below, so as at last to come in contact, in the usual manner, in the origin of the nasal process. Their structure and thickness were not different from the natural. Both parietal bones were between a fourth and a fifth larger than they are in a full-grown subject, and were as thick as in a child of six months, or rather more. Their margins were separated from each other, and from the frontal bone, about an inch and a half. The occipital part of the occipital bone, like the frontal, was about a fifth larger than it commonly is at this age, but was of the usual thickness and structure, and separated from the parietal bones by a space not less than three, but nearer four, inches. The squamous portions of the temporal bones, and the large wings of the sphenoid, were also larger than natural; and between their margins there were considerable intervals, and they were more indistinct outwards than natural. But the parts of the basis of the cranium, which occupy the median plane and its vicinity, were but little affected.

"3. *The Dura Mater.*—The whole inner surface of the cranium was lined, as usual, with dura mater. It adhered closely to the bones where they existed, and, where they were deficient, it was united to the inner surface of the integuments. It had the same thickness and structure as in health. Its falciform process was of the usual depth or breadth, but greatly longer. It stretched from the region of the frontal spine to the internal transverse ridge of the occipital bone, as usual, and there terminated in the tentorium cerebelli. The tentorium itself was very little enlarged or altered in its situation or appearance.

"II. *Of the Contents of the Cranium.*

"1. *The Water.*—This was drawn off by a puncture through the most prominent point of the occiput; a blowpipe being immediately introduced to facilitate its discharge. By this opening all the water was evacuated. The quantity was 136 ounces by weight. It had the transparency and want of colour which are so remarkable in this secretion, being exactly like the purest spring-water.

"2. *The Brain and its Membranes.*—As soon as the whole water had been evacuated, an incision was made with a pair of scissors, first transversely on the left side, from the puncture between the occipital and parietal bones, for about two inches, and then, at right angles to this, a little to the left of the median plane, from the puncture all the way forward to the brow.

"When the opening in the course of this incision had been made sufficiently large, we looked through it into the interior of the cranium, conceiving it possible that appearances might be advantageously seen in that stage of the dissection, which might afterwards become less distinct; and certainly the aspect of parts was very striking. The brain occupied the lower part of the cavity alone; the rest was entirely empty, excepting only that the falx projected down into it, but still separated from the brain (between the hemispheres of which it naturally penetrates) nearly two inches.

"The cavity being fully exposed, and the parts minutely examined, the following was the result:—Those surfaces of the two hemispheres

of the *great brain*, or brain proper, which are usually applied to the falx of the dura mater, were separated from each other for about four inches, except within an inch of their anterior extremities, where they remained united in the natural manner. The corpus callosum was wholly wanting, except two white bands, which stretched across between the anterior horns of the ventricles, nearly parallel to each other, about a quarter of an inch apart, and each of them from an eighth to a quarter of an inch broad. We took these to be vestiges of this body. I endeavoured to produce a fibrous laceration in these bands, but their softness did not admit of it. The fornix had also almost entirely disappeared:—perhaps we ought to say, entirely; for there remained only a round white cord, of the diameter of a crow-quill, on the right side, which ran from the region of the anterior pillars of the fornix, closely tied, by means of the pia mater, to the lower surface of the convolution which usually overhangs the corpus callosum, backwards towards the commencement of the hippocampus, in the inferior horn of the right lateral ventricle, where it gradually disappeared. Yet this cord had been little analogous in its structure to nervous matter; it was firm and tough, and not easily torn. The septum lucidum was entirely gone. There was not the slightest appearance of the anterior commissure of the brain remaining. The folded layers of white nervous matter anterior to the pineal gland, commonly called the *posterior commissure*, were quite distinct, and both broader and thicker than usual. The ventricles were considerably enlarged; and, from the disappearance of the corpus callosum and fornix, they formed one common cavity with the parietes of the cranium, and a membrane afterwards to be described. Had they been quite shut up, they would perhaps have contained about * * * * of the whole fluid found within the head. When the brain was first examined, it presented an appearance like that which anatomists daily produce, when they divide the corpus callosum and fornix longitudinally from behind forwards, and allow the hemispheres to separate from each other by their own weight. But, owing to the absence of the parts mentioned, the surface exposed was much more extensive in this case. Besides, the depth or breadth of that flat surface of each hemisphere, which in a healthy cerebrum is applied to the falx, and is bounded by the corpus callosum below, was in this instance a good deal diminished. This change had taken place to a considerably greater extent on the left than on the right side.

"Hardly any part of those convolutions and white nervous matter on which they rest, which form the median surface of the left posterior lobe, remained. The parts looked as if the inner wall of the posterior horn of the left lateral ventricle had been shaved away. In consequence of this, the surface of the inferior horn was freely exposed, and a full view might at once be obtained of the whole cornua of this ventricle. On the right side, although one could, from the absence of the posterior extremity of the corpus callosum and fornix, see almost down to the anterior extremity of the inferior horn, without displacing the parts, yet the inner surface of the posterior lobe was not more narrowed than the

* Not filled up by Dr. Gordon.

portions of the hemisphere more anterior to it. The third ventricle was considerably widened. The flat inner or median surfaces of the optic thalami were at least half an inch asunder. The cavity of the infundibulum was enlarged in proportion; but the aqueduct of Silvius, or passage to the fourth ventricle, was of its usual dimensions. The tela choroidea and plexus choroides had entirely disappeared, so that the third ventricle communicated, at all points, freely with the lateral ventricles and the general cavity of the cranium. The only change in the corpora striata and optic thalami, was their being less elevated than usual. The tænia semicircularis was very distinct. The colliculus, or ergot, in the posterior cornu of the left hemisphere was entirely gone, the very wall from which it projects having disappeared; nor was this eminence at all perceptible in the right hemisphere. Both hippocampi remained in the inferior cornua, but they were broader and less elevated than usual. The band on each of them, called the *tænia hippocampi*, so remarkable in a healthy brain, was entirely wanting; and, in consequence of this, the inner border of each hippocampus flowed gradually into the inner convolution of each middle lobe. The whole inner surface of the ventricles was quite smooth, and lined with an epithelium, preserving all the increased thickness and strength which is so remarkable in every case of hydrocephalus.

"The thickness of white nervous matter within the cavities of the ventricles and the basis of the convolutions, was diminished proportionally to the enlargement of these cavities. Opposite to the junction of the posterior and inferior cornu of the right lateral ventricle, it measured only a sixth of an inch.

"The only part where the convolutions were distinctly diminished in depth, was opposite to the posterior horn of the left lateral ventricle. Here they were fully one-half lower or shallower than usual. At all other parts they were of their usual dimensions, and, on being divided, exhibited the usual proportion of white and brown matter.

"All the parts in the region of the basis of the brain were entire. The olfactory and optic nerves, and the motores oculorum, could be distinctly traced to their origin; and they presented no appearance of derangement of structure.

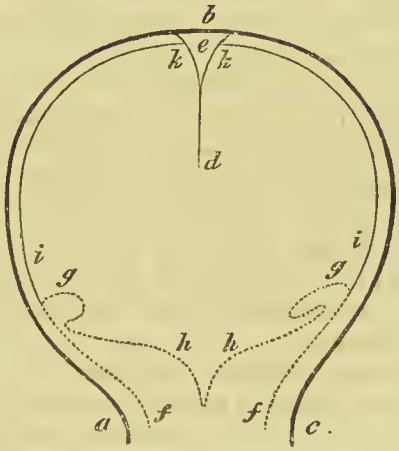
"The only change which the substance of the cerebellum had undergone, was a little flattening of the left hemisphere, and proportional elevation of the right; and the vermiform processes and parts usually occupying the median plane, were placed about an eighth of an inch to the right of this plane. Internally, its structure was perfectly natural; and the fourth ventricle had undergone no enlargement. All the nerves issuing from it, viz. the trigeminal, the pathetic, the abductores oculorum, the facial, and the auditory pairs, were quite entire.

"The medulla oblongata, and the nerves springing from it, were in a healthy state.

"The pia mater presented nothing unusual. A whitish tough cord, of the diameter of a crow-quill, ran across from one hemisphere of the brain proper to another, which, on minute examination, was found to be a tube, and seemed obviously to be a branch of the arteria corporis callosi.

"All the parts which were provided with pia mater, were likewise covered with a natural arachnoid membrane.

"One of the most remarkable effects, however, resulting from the disease in this instance, was the production of a new membrane, which was interposed between the dura mater and the water, over the whole extent of that part of the enlarged cavity of the cranium which was not occupied by the brain. This membrane was perfectly transparent and colourless, without any appearance of laminæ or fibres, or vessels of any kind. It was soft and flexible, and about three or four times thicker than the arachnoid membrane, even where that membrane is thickest, in the region of the basis of the brain. In short, it resembled, in a remarkable degree, the amnion of the gravid uterus. It arose below from the whole inner and upper edge of each hemisphere, from the external border of the posterior lobe, and from the inner convolution of the middle lobe, along that line to which the arachnoid membrane is affixed in the basis of the brain; but it was not continuous with that membrane at this part. Extending upwards from these attachments, it lined closely the whole inner surface of the dura mater, and terminated on each side by being attached, along its whole upper and median border, to the root of the falciform process, along the course of the longitudinal lines. The following rude diagram, representing an imaginary section across from ear to ear of the dura mater, and the parts within it, will perhaps illustrate the connexions of this membrane:



The outer strong line, *a b c*, is a section of the dura mater; *b d*, a section of the falciform process; and *e*, a section of the superior longitudinal sinus in that process. The dotted line, *f g h*, represents the outline of a section of each hemisphere of the brain proper. The fine line, *i k*, represents a section of the new membrane, issuing from the upper edge of each hemisphere below, and attached to each side of the root of the falx at *k* above.

"At its origin from the hemispheres, its root could be easily separated into two layers for the extent of about an eighth of an inch, and each layer was continuous with the arachnoid membrane, crossing the convolutions thus:— Its outer surface was applied close to the dura mater, but

it was not attached to it at a single point, except close to the falx above; so that it was quite movable upon it, and could be raised from it with the utmost ease. Towards the fore part, three large venous trunks could be seen running upon its inner surface towards the longitudinal sinus, into which they opened. These corresponded exactly to the large anterior venous vessels of the pia mater in a healthy brain.

"The whole great brain, or brain proper, weighed, with the pia mater and arachnoid membrane, $16\frac{3}{4}$ ounces.

"The right hemisphere weighed $8\frac{1}{2}$ ounces, the left $8\frac{1}{4}$, or $\frac{1}{4}$ ounce less than the right.

"The weight of the whole cerebellum, with its membranes, and the medulla oblongata attached to it, was $2\frac{1}{2}$ ounces; so that the weight of the whole brain was $19\frac{1}{4}$ ounces."

Dr. Duncan is of opinion, that the membrane described by Dr. Gordon is not to be regarded as a new one, but as the arachnoid coat, morbidly distended and thickened. In this supposition we cannot agree, as it is expressly stated that there was "a natural arachnoid membrane" besides.

In a recent Number of the Revue Medicale, M. Bayle has related some cases of disease in different parts of the *brain* and *spinal marrow*, which appear to us more valuable than all his numerous experiments and physiological speculations. The first case, when viewed in conjunction with others of a similar nature, may be regarded as proving that the general doctrine, which constitutes the brain the exclusive seat of sensation, is not true,—at least in its full extent. It likewise presents what we believe has at present no parallel in the records of pathology,—viz. an example of a cancerous, or rather of an encephaloid, tumor in the vertebral canal. A washer-woman, aged fifty-two years, suffered at first from severe lancinating pains in the thorax and abdomen, and afterwards in the pelvis and lower extremities; after a time, these became affected with convulsions, and at length with perfect flexion, immobility, and insensibility,—except that they suffered occasionally from shooting pains, which originated in the pelvis, and appeared to follow the course of the nerves. On examination after death, the spinal marrow was found to be healthy as far as the tenth dorsal vertebra, where, on its posterior surface, a tumor was found between the folds of the arachnoid. This tumor was of an oblong shape, about two inches in length, and placed longitudinally in the medullary canal; its internal structure resembled the substance of the brain, but was firmer; it had no adhesion to the spinal marrow, which for two inches was rendered very soft throughout its whole thickness, and which, at the most prominent point of the tumor, appeared divided transversely; so that the two portions, separated by a slight interval, resembled two cones placed with their summits towards each other. An attentive examination of the parts did not lead to the discovery of a single fibre which remained free from the disorganization. The limbs were wasted, but the nerves did not appear to be smaller than usual. The most important part of this relation is, that, while the communication between the upper and

lower portions of the spinal cord seem to have been cut off, the inferior extremities were nevertheless the seat of frequent lancinating pains.

Four examples (and, so far as we know, only four,) of a similar nature have been recorded: one by DESAULT,* which took place in a man who had been shot in the back, at the right side, and before the inferior angle of the scapula. This patient lived above twenty-four hours, voiding his urine frequently and without difficulty, and being able to move the pelvis and inferior extremities up to the moment of his death. The ball had entered the chest between the eighth and ninth ribs, went through a portion of the right lung, penetrated the right side of the tenth dorsal vertebra, and entirely divided the spinal marrow. This is probably the only example in which the sudden division of the spinal cord has not been followed by paralysis of the parts beneath it; in all the other instances, the interruption has been the result of changes effected slowly. This case, it is true, falls not within the period assigned to the present compilation; but we have alluded to it, as interesting in relation to the others.

A second example of division, or rather interruption, of the spinal marrow, will be found in our Number for July, 1823, related in MAGENDIE's Journal, by Dr. RULLIER: in this case, the patient retained the free use of his lower extremities, notwithstanding the almost complete destruction of a great portion of the spinal cord. And in the work lately published by M. OLLIVIER on the Spine,† we find two more instances of a similar nature: these we shall here record.

A child, of eight or nine years old, of scrofulous constitution, fell a victim to caries of the vertebræ, accompanied by intense and continual head-ache, but retaining to the last the feeling and power of motion in the lower extremities, although they were weak and wasted. On opening the body, a complete interruption of the spinal cord was discovered, extending from the ninth dorsal to the first lumbar vertebra, —that is, about four inches. The envelope of the marrow was flattened, but presented no other alteration. The upper part of the cord terminated at the interruption in a sort of bulb; there was no medullary matter in the intervening space, but the sides of the sheath were in contact without adhering.

The last example is as follows:—A young girl, thirteen years of age, died in consequence of a disease of the spine, accompanied with protuberance of the vertebræ in the dorsal region. The patient had been able to move the thighs and legs, and had got out of bed three or four days before her death, the viscera of the pelvis, &c. having suffered no interruption in their functions. On examination post-mortem, two vertebræ were found carious, with a considerable flattening of the marrow throughout the extent of five inches; the membranes were inflamed; and, "at the lower part of the dorsal region, the nervous pulp, reduced to a putrid state, was converted into a pultaceous matter, and deficient for four or five lines."‡

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* *Journal de Chirurgie de* DESAULT, tom. iv.

† *De la Moelle Epiniere, et de ses Maladies, &c. &c.* Par C. P. OLLIVIER D'ANGERS, &c.—Paris, 1824.

‡ *Lib. cit.*

In allusion to cases of this kind, M. Bayle asks in what manner the phenomenon is to be explained, and suggests the four following hypotheses:—1. Either the spinal marrow can serve as a conductor of sensation and motion, notwithstanding the entire disorganization in some part of its length; 2, or the enveloping membranes can discharge this function; 3, or the external impressions and the determinations of volition may be propagated by the anastomoses of nerves; or, lastly, the limbs can derive sensation and the power of motion from a portion of the spinal column which has ceased to communicate with the brain. He gives the preference to the last of these conjectures.

Another case related by M. Bayle is of considerable interest, from its relation to some of the many hypotheses prevalent in France about the functions of the cerebellum. A woman, aged seventy two, enjoyed very good health up to the 14th of January, 1824, when she was suddenly seized with giddiness, and fell to the ground in an apoplectic fit. No palsy nor loss of sensation followed, but she remained in a state resembling sleep. About the third day, convulsions of the inferior extremities came on; and, on the fifth, coma and death. An enormous effusion of blood was found in the centre of the cerebellum, and considerable fullness of the vessels of the uterus and ovaries. This patient pulled away the limbs when very slightly pinched, and put out her tongue when desired; phenomena incompatible alike with the opinion of those who attribute movement, as of those who attribute sensation, exclusively to the cerebellum.

It was remarked, so early as the time of ARETÆUS, that paralysis took place on the side opposite to that on which a blow of the head had been inflicted; and so general is this, that some (Rouchoux, Serres, &c.) have denied the possibility of the injury and the palsy both occurring on the same side. In a Memoir on this subject, by M. BAYLE,* we find eight examples in which, on examination after death, *the lesion of the brain was found on the paralysed side.* They stand as follows:—1. A blow on the left temple: palsy of the right arm; effusion of blood on the right; and no lesion on the left side of the brain. 2. Comatose affection, with hemiplegia of the right side; disorganization of the cerebrum and cerebellum on the same side. 3. Attack of apoplexy, with hemiplegia of the right side; erosion of the right optic thalamus, and effusion of blood into the ventricles, so as to produce considerable pressure on the right side, and but very little on the left. 4. Attack of apoplexy, with hemiplegia of the right side, which passed off to a considerable extent after a time; in four years, a fatal seizure. Three cavities with apoplectic cysts, effusion of blood into the optic thalamus, and softening of the corpus striatum,—all on the right side. 5. Apoplectic seizure, with hemiplegia of the right side; softening of the right hemisphere. 6. Apoplectic attack, with hemiplegia of the right side; bloody extravasation in the right hemisphere. 7. Mania, with epilepsy; palsy of the left side: rachnitis and softening of the left hemisphere.—

* *Memoir sur l'Existence de la Paralysie du même côté que la Lesion Cerebrale qui la determine,* par A. L. I. BAYLE.—(Revue Medicale Janvier.)

These cases are taken from the works of Smetius, Forestus, Valsalva, Bruner, and Morgagni, the seventh only being his own; and it is remarkable as the only instance in which the injury and palsy both occurred on the left side.

M. Bayle endeavours to explain this phenomenon by supposing that there are some nervous fibres which do not cross. "In fact," says he, "amid the fasciculi of nerves which compose the medulla oblongata, the anterior, which intersect each other before they arrive at the brain, contain some fibres which do not appear to undergo any kind of crossing; while the posterior and lateral fasciculi do not present any manifest intersection."

One of the fashions at present prevailing among the French, is for the elder physiologists to set on some of the younger to write for them, and bolster up their reputation by the repetition of their experiments and the reiteration of their opinions. It appears to be with this view that M. LACRAMPE-LOUSTAU has been made to publish some researches conducted "sous les yeux de M. SERRES." It was a problem laid down for solution by the latter, in his work on Apoplexy,—"a paralysis being given, to determine its seat by the symptoms?" In the Memoir before us we find it asserted, that palsy confined to the arm arises from a lesion of the posterior part of the optic thalamus, and of its posterior radiations; that paralysis of the leg proceeds from injury of the anterior half of the corpus striatum, or of its anterior radiations; that in hemiplegia it is a lesion of the corresponding half of the optic thalamus and corpus striatum, or of the radiations proceeding therefrom. In one case it was the anterior part of the corpus striatum, and posterior of the optic thalamus, which were affected. In short, according as the palsy is more complete in the arm or in the leg, is the alteration more deep and more extensive towards the thalamus or the corpus striatum. Laying these positions down as facts, it is concluded that the posterior radiations of the optic thalamus preside over the movements of the arm, and that the posterior radiations of the corpus striatum preside over the movements of the leg.*

Following the same arrangement as in the preceding department, we next turn to the *circulating system.* Dr. ABERCROMBIE has published a collection of cases of disease of the heart, under the heads of "Inflammatory Affections," "Organic Affections," "Rupture," and "Displacement of the Heart."† These are not devoid of interest, but contain few points of novelty which are calculated for insertion here. Among the organic peculiarities, the following is the most remarkable.

"The left auricle of the heart was very much enlarged, and contained two remarkable bodies. The one was a spherical cyst, about an inch

* *Recherches faites a l'Hospice de la Pitie, sous les yeux de* M. SERRES, *pour determiner les Rapports des Lesions du Cerveau avec les Paralysies des Membres, superieurs et inferieurs.* Par M. LACRAMPE-LOUSTAU.—(Revue Med. 1824.)

† *Contributions to the Pathology of the Heart.* By JOHN ABERCROMBIE, M.D. Fellow of the Royal College of Physicians.—(Transactions of the Edinburgh Medico-Chirurgical Society.)

and a half in diameter, full of dark-coloured tenacious fluid. The cyst was externally of a dark-brown colour, nearly black; and, in the fluid which filled it, there were several membranous substances of the same dark colour, like similar cysts in a collapsed state. The other body was a cup, or hollow hemisphere, of a diameter exactly corresponding with the spherical cyst, taking in the half of it. It was about one-third of an inch in thickness at the bottom, and became gradually thinner towards the mouth, where it terminated in a thin margin. It was of a light brownish or ash colour, and a firm fleshy structure, and composed of concentric laminæ, eight or nine of which could be separated from each other at the thickest part of it. It was found lying loose in the cavity of the sinus; but, on the outer surface of it, at the bottom, there was an irregular roughness, as if it had been torn off from some attachment to the parietes of the auricle. The spherical cyst did not appear to have had any attachment. The mitral valves were slightly ossified."

This patient had suffered from severe suffocating cough, palpitation of the heart, and frequent attacks of dyspnœa. The palpitations frequently terminated in a state resembling asphyxia, which continued for a few minutes; she had also occasional temporary loss of sight, in which an object gradually disappeared for a time, as if a cloud had intervened. Dropsical symptoms afterwards came on, and she died from gradual exhaustion. It is remarkable that the pulse continued regular until within a week of her death. We remember a similar case, which occurred in the Royal Infirmary of Edinburgh, about 1812.

Connected with this branch of pathology, we may mention a case of *malformation*, which we owe to Dr. Holmes, of Montreal.* In a man, who lived to the age of twenty-one, notwithstanding that he had been delicate from infancy, and suffered much from palpitation attended with blueness of the lips, it was found that the right auricle had become so much enlarged as to be capable of containing a pint, the musculæ pectinatæ being very strong, and the inner surface feeling gritty, apparently from earthy deposition. No communication existed between this auricle and its corresponding ventricle, but the blood passed from it into the left ventricle by a large opening, furnished with valves similar to the bicuspid. Between the ventricles, a communicating aperture, with tendinous margins, existed, just beneath the semilunar valves of the aorta. The foramen ovale was open. The right ventricle was much smaller than usual; the left much enlarged, and very thin. The course of the blood must obviously have been as follows:—Entering the right auricle by the two cavæ, it would pass into the left ventricle, except a small portion that might get into the auricle; on the ventricles contracting, such portion of the blood on the left side as was not thrown into the aorta would pass into the right ventricle, and hence reach the lungs, to be returned to the left auricle.

A case of *gangrene of the heart* has been put on record by Dr.

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* *Case of Malformation of the Heart.* By W. F. Holmes, M.D. &c.—(Transactions of Medico-Chirurgical Society, Edinburgh.)

KENNEDY, of Glasgow, which, although described in rather an affected style, is nevertheless possessed of sufficient interest for quotation.

"This disease, in the progress of its ultimate stage, was accompanied by the following manifestations:—Together with an unsteady glistening eye, an indescribable expression of anxiety was depicted on the patient's countenance. Depositions of dark sordid matter on her gums and teeth were incessantly renewed. The surfaces of her tongue, mouth, and fauces, were parched, rough, and black: in the end, the margins of her lips grew quite livid. Her voice was broken and mournful. The dejections consisted of very dark, scybalous, intolerably fœtid substances; her urine was scanty, thick as syrup, and porter-coloured.

"Her pulses, at first small, hard, irregular, rapid, afterwards became feeble and less frequent, and intermittent: long before death, they disappeared altogether from the wrists. Syncopal tendencies often recurred, but never terminated in fainting. A sensation of burning heat pervaded all the regions of her chest; in the left it was excruciating. During the last four days of her life, the patient suffered much from stinging pains, which first occupied her extremities, then pervaded the shoulders and line of the vertebral column, then seized the left thoracic department, and, after the last bleeding, went to be immoveably fixed in the right hypochondriac region. She had catchings in the chest and orthopnœal breathing.

"At an early period, cardiac palpitations supervened, and gradually acquired frequency as well as strength. As the disease advanced, however, and the powers of the heart began to yield, its actions became very intermissive and troubled. All the extremities, superior and inferior, suffered progressive tumefaction from the diffusion of extravasated lymph. The left arm and limb, in particular, were distended almost to bursting: their joints, at first nearly inflexible, could not, during the three days which preceded her dissolution, be moved without occasioning exquisite pain. Broad livid patches, in some places, disfigured their surfaces; on others were large sphacelated wheals. At the same time, she was altogether so impotent as to be incapable of changing, in any degree, her position without assistance. Many hours before her demise, she fell into a state of comatose abstraction, which uninterruptedly increased, till the last of her vital forces irreparably failed.

"Twenty ounces of turbid serum were taken from the chest: it had an impure orange colour and a fœtid smell. The pericardium enclosed four ounces of a fluid in all respects similar. On the internal surface of this capsule was much vascular net-work, dark, as if composed of injected veins.

"All the parts of the heart, external and internal, exhibited distinct marks of having been the seat of gangrenous inflammation. They were preternaturally flaccid, and dark in colour as the darkest coagulated venous blood; they could be easily perforated in every direction with the finger. When thus torn, they exhaled a putrid odour; but no blood exuded from their ruptured vessels. The left ventricle, in particular, was quite livid, and destitute of its muscular tenacity; it was little firmer than cerebral structure. When lacerated, it threw out a most offensive odour, not different from what is generated by putrescent

animal substance. All the cavities of the heart were empty; but the large veins, especially the abdominal, were loaded with grumous blood.

"On the thoracic face of the diaphragm and surfaces of the left pleural membrane, were small patches of vascular reticulation: in other parts, they were roughened with darkish granules, having more firmness than those by which structural lesions are repaired. Although heavily loaded with blood, the lungs appeared healthy; they remained free from adhesions of every kind.

"Patches of morbid structure, unequal in size, and discoloured to various shades of darkness, had formed on different parts of the surface of the body; some of them were putrescent, others putrid. Each of the left extremities was in a state of general tumefaction, and firm from distention: around their articulations, and over the central portions of their muscles, the surface had assumed a livid hue."*

Three cases, by MM. ANDRAL and BAYLE, are to be found in a recent French periodical, in which the heart was affected with a disease having all the characters of cancer. It is remarkable, but from these cases it would seem that the muscular fibres of that organ may be in part destroyed, without any considerable derangement of the circulation.†

M. LOUIS has devoted much attention to the history of those cases in which a communication exists between the right and left cavities of the heart, and the following are the results at which he has arrived:‡—This communication may exist in a variety of ways, but the most common are the foramen ovale, and the perforation of the interventricular partition. It is congenital; is associated, in the majority of cases, with a well-marked narrowing of the pulmonary artery, and always with dilatation of one or more of the cavities, generally with those of the right side. The effect of this communication is a mixture, more or less ample, of the black and red portions of the blood; but the blue colour of the surface is rarely universal: sometimes it is only preserved in the face during the last few weeks of the patient's life, and occasionally is not perceptible at all. This communication, and consequent mixture of venous and arterial blood, may exist a long time without the health being affected, and many of the characters, as the discolouration and the sensibility to heat and cold, and sense of suffocation, are frequently wanting. The only pathognomonic symptom, according to M. Louis, is frequent fits of suffocation, which often come on periodically, and are excited by the slightest causes. The disease is neither incompatible with long life, nor with development of the intellectual faculties. These remarks are in conformity with general observation.

Proceeding to the history of particular tissues, we find that M. ANDRAL has published a Memoir on *inflammation of the pleura cover-*

* *Medical Repository*, April. † *Revue Medicale*, Fevrier 1824.

‡ *Observations suivies de quelques Considerations sur la Communication des Cavités droites avec les Cavités gauches du Cœur.* Par M. LOUIS.—(Arch. Gen. de Med. Novembre 1823.)

*ing the diaphragm,** of which affection he has seen many examples, either simple or combined with inflammation of the other parts of the pleura, or of the substance of the lungs. Without following him through the history of individual cases, we subjoin some of the conclusions at which he arrives with regard to the characteristic symptoms: among these he ranks a pain, more or less intense, along the margin of the false ribs, extending in general to the hypochondriac region, and sometimes to the loins; complete immobility of the diaphragm during inspiration; remarkable anxiety, evinced by sudden alteration of the features; orthopnœa, with inclination of the body forwards. Other symptoms, such as hiccough, nausea, vomiting, convulsive movements of the muscles of the face, delirium, and finally jaundice, where the pleurisy affects the right side. M. Andral regards the *paraphrenitis* of BOERHAAVE as having been in reality diaphragmatic pleurisy.

A Memoir on *the pathological anatomy of the peritoneum,*† by Dr. SCOUTTETEN, contains many instructive remarks, particularly with regard to inflammatory affections of that part. A good account of these has been given in the last Number of a respected contemporary Journal,‡ which we shall here transcribe into our pages.

"1. *Peritonitis Acuta.*—Our author thinks, and with justice, that it is needless to give various names to peritonitis, according to the portion of peritoneum which is inflamed, as omentitis, mesenteritis, &c. It is important, no doubt, to ascertain, as nearly as possible, in what portion of the membrane the focus of inflammation is placed, merely that the external means of relief may be there applied; but, to give names to these, is worse than useless.

"When irritation has been determined to the peritoneal membrane, and there produced the mildest shade of inflammation, we observe small red spots, not more than a line in diameter, separated from each other, and, on minute examination, appearing to be clusters of puncta crowded close together. Between these red spots, the peritoneum, when viewed with a good magnifying glass, presents portions of its surface of a natural colour. The appearance now described is rarely to be seen in man, for obvious reasons; but it may be readily produced in animals, as dogs, by injecting an irritating fluid into the cavity of the peritoneum. Thus, if bile be thrown in and the wound closed, the above appearances will be strikingly produced in twenty-four hours.

"It has been remarked by several acute observers, that all the symptoms of peritoneal inflammation have been present during life, and yet on dissection no trace of it could be found on that membrane. On this point our author professes to be sceptical. But we think there can be no reason to doubt that mere injection of vessels, or the first stage of inflammation, where the structure of the tissue is not altered, may disappear in the interval between death and dissection. Indeed, our author's own experiments give the greatest support to this opinion. Into

* *Observations sur l'Inflammation de la Pleure Diaphragmatique.* Par ANDRAL, fils, M.D.—(Archives Gen. de Medecine, Octobre 1823.)

† *Archives Generale de Medecine,* Dec. 1823, Feb. 1824.

‡ *Medico-Chirurgical Review,* June.

the peritoneal cavities of dogs he injected bile, and, at the end of twenty-four hours, examined the abdomen, when inflammation was unequivocal. The animal was then immediately killed by pithing, and an evident diminution of the inflammation took place with death. As the dogs got cold, the diminution was still greater. These experiments were repeated many times, and always with the same result. It is therefore highly probable, if not quite certain, that the first stage of peritoneal inflammation, in some particular constitutions, may produce such disturbance in the vital functions as to destroy life; and that the collapse after death may dissipate the redness and other marks of phlogosis which existed anterior to that event.

"In the early stages of inflammation, our author found by experiment that the surface of the peritoneum, though apparently dry and glistening, was, when touched with the finger, covered with an unctuous and viscid exudation. Sometimes, instead of the red spots above described, this first shade of phlogosis presented merely a development of red vessels running in lines to a greater or less extent.

"In the progress of the inflammation, the red spots become more extended and close together,—ultimately so blended as to appear one homogeneous patch, of a scarlet colour. Still at this period the distended vessels are visible, but the peritoneal tissue does not appear to be thickened. It has, however, by this time lost its transparency. When the phlogosis is still more advanced, the redness becomes more intense and extended: sometimes occupying the whole peritoneal expansion; at others, bounded to the forms of bands or stripes, traversing various portions of intestine, or only occupying the space where the intestines adhere to each other. The intense red colour at this period is not wholly owing to the injection of vessels, but to a sanguineous exudation which is diffused over the peritoneal surface, adhering very tenaciously to it, and presenting a villous appearance. Even in this stage the peritoneum will sometimes appear dry and shining; but, more commonly, we now find an effusion of a whitish fluid into the abdominal cavity.

"Such an acute inflammation of the abdomen can only last, our author thinks, a few days, (three or four,) without death or a change for the better. The abdominal pain is generally very acute,—the patient drawing up the thighs, or bending the body forwards, to relax the abdominal muscles. Sometimes the pain is bounded to a single point, and then we generally find the inflammation also bounded to the same spot. On the 3d September last, our author opened a man who had felt acute pain in the right iliac region for two days prior to his death. He found, on dissection, the marks of intense inflammation of the peritoneum bounded to the appendix cæci. At times, the peritoneum covering the bladder will be the seat of phlogosis, and then the evacuation of the urine will be almost uniformly suspended, and the pain felt in the pelvis. The peritoneum covering the inferior surface of the diaphragm may be the sole seat of inflammation, and then we have almost constant hiccup. A soldier in the Val de Grace Hospital experienced, for some days, an intense gastro-enteritis, which began to give way to the usual means, when all at once a violent pain was experienced (augmented by pressure) in the direction of the diaphragm, accompanied by constant hiccup,

shrinking of the features, drawing up of the legs and thighs. These symptoms could not be controlled, and he sunk in two days. M. Broussais prognosticated the existence of sub-diaphragmatic inflammation of the peritoneum, which was completely verified by dissection.

"In acute inflammation of the peritoneum, we have this membrane sometimes of a purple or even black colour, with strong adhesions of the folds of intestines together, without the intervention of a false membrane, which at other times is occasionally, indeed often, seen. Actual gangrene of this membrane has been found after death; but this is of rare occurrence.

"Another phenomenon, of still rarer occurrence, presented itself to our author in the year 1822, in the body of a man who had died of acute peritonitis. This was a subperitoneal emphysema. The whole sheet of this membrane was equally elevated by gas, which could be pressed from place to place, and made to accumulate in particular positions. In another case he found the same phenomenon, but on a much more limited scale, the emphysema being bounded to the peritoneum lining the diaphragm and covering the liver. In neither of these instances was there any sign of putrefaction to account for the collection of gas.

"Between the laminæ of peritoneum forming the mesentery, we sometimes find collections of purulent matter, in peritoneal inflammation. This, however, is not of frequent occurrence.

"When peritoneal inflammation is extended to twenty, twenty-five, or thirty days, false membranes of albuminous matter are found gluing the convolutions of the intestines together, and even these last to the peritoneum lining the abdominal parietes.

"During the first few hours of acute peritonitis, there is very little effusion of fluid beyond the usual halitus; but, after the inflammation has lasted thirty-six or forty hours, there will be an evident effusion, generally of a whitish or milky appearance. Blood itself has been found extravasated in acute peritonitis; but this is a rare phenomenon. The quantity of effusion varies from a few ounces to some pints. Sometimes it is nearly as limpid as water, and containing no albuminous flocculi; in other cases it is thick, and resembling diluted pus of a very peculiar odour, which can never be forgotten by those whose hands have been imbued in it.

"2. *Alterations of structure observed after chronic inflammation of the peritoneum.*—Chronic is often the consequence of acute peritonitis; but it also not unfrequently creeps on in a slow, and almost insensible, manner, without any violent symptom. This last may be properly termed 'primitive chronic peritonitis.'

"*Chronic after acute peritonitis.*—On opening the body of a person who has had peritonitis for fifty or sixty days, we shall find the abdomen containing a greater or lesser quantity of a whitish fluid; a number of false membranes gluing the intestines together, or forming sacs which contain fluids of different appearances. When these false membranes are detached from the peritoneum, we shall find that structure less red than in acute peritonitis,—sometimes, indeed, scarcely coloured. In these cases, the effused fluid is rarely in such quantity as to sensibly distend the parietes of the abdomen. In some cases, however, a con-

siderable quantity of limpid yellow serum will be found, without any trace of false membranes, but with the peritoneum thickened, reddish, and highly injected; or the great omentum thickened, red, fleshy, or presenting hydatiform bodies. These two shades of peritonitis are not attended with much pain, and bear abdominal compression without much inconvenience. The patients only complain of a sense of weight, and they are much harassed with constipation of the bowels. When chronic peritonitis has lasted many months, in certain constitutions, we find, besides numerous adhesions and false membranes, a development of tubercles, of different sizes, and various degrees of consistency.

"Instead of the serous or puriform fluids which we generally find after peritoneal inflammations, there is sometimes, though rarely, an extravasation of sanguinolent, or even pure sanguineous fluid, resulting from rupture of vessels.

"Of ulceration, gangrene, and scirrhus, of the peritoneum, we shall not speak, as they are extremely rare in their occurrence.

"The above are the general appearances presented after inflammation, acute and chronic, of this important membrane, and the practitioner should bear them in mind when he is prosecuting his post-mortem researches."

In our last Number we laid before our readers a brief notice of Dr. DUNCAN's opinions with regard to those serious, and even fatal, consequences which occasionally follow slight wounds received in dissection, or from simple venesection. A very striking example of what he has called *diffuse inflammation of the cellular membrane*, attended by some anomalous symptoms, remains to be mentioned in this place. A woman, aged thirty, fell under Dr. Duncan's care, in September 1821, labouring under symptoms which were regarded as the fever at that time prevailing epidemically in Edinburgh. After a few days it was perceived that the right arm and right side of the thorax were affected in a manner similar to what occasionally results from venesection; and it is proper to observe that the patient had been bled, the lancet-wound healing by the first intention. From this time the symptoms increased, notwithstanding the administration of an emetic, general and local blood-letting, and strict antiphlogistic regimen. After a few days she began to mend, and continued alternately recovering to a certain extent, and again relapsing. During one of these accessions of fever, she complained of severe pain of the right side, increased on pressure; the side was swollen, and a tumor, about the size of a pigeon's egg, was perceived above the right clavicle. Soon after she was attacked with some cough and free expectoration; at the same time the external tumors began to soften, and ultimately became emphysematous,—a gurgling noise being heard as the air rushed into them during respiration. As the breathing became much more oppressed whenever the expectoration diminished, it was judged advisable to make an opening into the side, so as to give a free vent to the pus as it formed. This was accordingly done by Mr. WISHART; when a blast of air was discharged by the wound, in addition to the pus. From this time she scarcely brought up any matter by expectoration, but gradually sunk, and died on the

5d of December, being rather more than three months from her first admission into the hospital. On examining the body, very extensive abscesses were found on the breast and neck, communicating with the lungs; so that the case presents a remarkable instance of circumscribed emphysematous tumors, in which the air was confined in cysts bounded by adhesive inflammation.*

Dr. ABERCROMBIE, continuing to prosecute his pathological researches, has published some observations on inflammatory affections and ulceration of the stomach, on diseases of the pylorus, and of the pancreas.† In regard to the *stomach*, the author insists much upon the insidious nature of the symptoms which accompany chronic inflammation of this viscus, and dwells on the importance, and at the same time the difficulty, of distinguishing the complaint from simple dyspepsia. The progress of the inflammation has appeared to Dr. Abercrombie to be extremely slow, occasionally subsiding and recurring, until at length it gives rise to thickening of the coats of the stomach, to adhesions, and to ulceration. These papers may be consulted with advantage, as they evince considerable research, and contain frequent references to similar cases recorded by continental writers, especially among the French; yet they do not present many features of absolute novelty, the most interesting cases, if not the greater number of the whole, being borrowed from others. The following case, however, we think it advisable to quote, as one of the most extensive examples of ulceration of the stomach on record.

"A lady, aged forty-nine, had been in bad health through the winter 1811-12, complaining chiefly of general weakness, and a constant uneasiness across the epigastric region, with occasional attacks of acute pain towards the left side. In May, 1812, she began to be affected with vomiting, which continued from that time, and became more and more urgent. I saw her in July, and found her much emaciated and reduced in strength, so as to be confined to bed. She complained of an obtuse pain in the epigastric region, where considerable hardness was felt; and she vomited a portion of every thing she took, sometimes immediately after taking it, and sometimes a considerable time after. The pulse was weak, and rather frequent. She continued with very little change till the beginning of September, when the vomiting subsided, and she was completely free from it for more than a fortnight. During this time she was affected with diarrhœa; her strength sunk, and she died on the 23d; the vomiting having returned three or four days before her death, though with less severity than before. During the period when she was free from vomiting, she took food and drink of various kinds, and in very considerable quantities, and continued to do so till a few hours before her death.

"*Dissection.*—On opening the abdomen, and looking for the stomach, a large irregular opening presented itself, which was found to

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* *Case of Diffuse Inflammation of the Cellular Substance of the Side, &c. &c.* By ANDREW DUNCAN, jun. M.D.—(Transact. Med.-Chir. Society, Edinburgh.)

† *Edinburgh Medical and Surgical Journal*, January 1824.

lead into the cavity of the stomach, a large extent of the great arch being entirely destroyed. On the left side, in the region of the spleen, there was found a large irregular mass, which appeared to consist of an enlarged and diseased spleen, and the remains of the great arch of the stomach, so blended into one mass, that it was impossible to distinguish one part from another. In the substance of it there was a cyst, full of very fetid matter. This mass was attached to the cardia by a narrow neck, which remained of the coats of the stomach at that place; and, when the parts were taken out, and displayed by suspending the stomach by the cardia and the pylorus, the appearances were very remarkable. When stretched out in this manner, about one half of the stomach, at the pyloric extremity, was sound and healthy. This portion was attached to the cardia by a narrow portion of the small curvature which remained; and, by another small portion of the great curvature, the mass now referred to hung down on the left side. The remainder of the stomach, consisting of the left side and lower part of the great arch, was entirely wanting to such an extent, that, when the parts were extended in the manner now mentioned, it appeared that nearly one half of the stomach had been destroyed. There was reason to believe that the part which seemed to be wanting was involved in the diseased mass on the left side, and that the sound parts had been separated from this portion by a line of ulceration of such extent, that the sound extremity remained attached to the cardia only by a portion of about two inches in breadth, which remained of the small arch. The ulcerated edge, where the separation had taken place, was studded with numerous hard tubercles, like the edges of a cancerous ulcer.* The pancreas was hard, the liver pale and soft; the other viscera were healthy."

The diseases of the *pylorus* related by Dr. Abercrombie are principally cases of schirrus; the most remarkable of which is the history of a patient, who had none of the symptoms characteristic of this disorganization. During the last twelve months of his life he had no complaint, except progressive wasting and debility; there was no vomiting; the appetite was tolerably good, and the bowels regular: in short, he had no symptom except repeated attacks of violent pain in the abdomen. On dissection, "a large mass of schirrus, four or five inches in extent, surrounded the pylorus; and the pyloric orifice was so narrowed as scarcely to admit the point of a very small finger. The inside of the mass opened upon the inner surface of the stomach, by an ulcerated surface, covered with large cancerous looking tubercles. The other parts of the stomach were tolerably sound, and the other viscera were healthy."

Four cases of disease of the *pancreas* are mentioned by Dr. Abercrombie, and seem to have been of a cancerous nature. He regards disorganization of this organ as one of the causes of anæmia: he was particularly led to this opinion from the following remarkable case.

"A gentleman, aged thirty-five, died, after an illness of about eighteen months' duration, in which it was, to the last, impossible to say

* Some interesting cases of perforations of the alimentary canal are to be found in the *Archives Generales de Medecine*, Jan. 1825.

what was the seat of the disease. His complaints began in London with a febrile attack, which left him very weak. From that time he was liable to dyspeptic symptoms, with variable appetite, and undefined uneasiness in the epigastric region. Without any other complaints, he gradually lost flesh and strength; and, when Mr. Newbigging saw him, in January 1822, he found him thin and weak; but he was particularly struck with his remarkable paleness,—even his lips, and the inner surface of his mouth, being entirely colourless. About this time he had some vomiting, and was feverish for a day or two; but these symptoms soon subsided, and left him, as before, with variable and capricious appetite, and an irregular state of the bowels, which were sometimes costive and sometimes loose. He had frequent perspirations in the night-time, and appeared at all times languid and faint; but his pulse was natural, he took a good deal of food, and there was no symptom that accounted for his exhausted appearance. In January he seemed to improve considerably; but in February he became worse, being affected with diarrhœa, and his urine became scanty, and deposited a mucous sediment. These complaints, however, soon subsided; and he then complained chiefly of throbbing in the head, and a constant noise in the left ear. When I saw him, in the middle of April, he was reduced to the last degree of paleness and debility; but his pulse was full, strong, and regular. He took a good deal of food, and complained of nothing except a painful pulsation in his left ear. He died in the end of April, without any change of the symptoms, except that his pulse became frequent a few days before his death; but it continued full, and rather strong. The action of the heart was rather violent, and seemed to produce throbbing over the whole body.

"On dissection, all the internal parts were found remarkably pale and void of blood. The heart was sound, but remarkably empty. The pylorus was thickened and firmer than natural, and had contracted an adhesion to the pancreas. The pancreas was considerably enlarged, and was diseased through its whole structure, being in general hard and cartilaginous; but in some places soft, with the appearance of the medullary sarcoma. All the other organs were healthy."

We now turn to some points touching the pathology of the *fluids.*—An extensive series of experiments, conducted with the utmost care, and showing the remarkable advantage of being directed to a distinct and useful end, have been recently performed at the Hôtel Dieu, under the superintendance of M. Recamier.* The first experiment will at once illustrate an important general fact, and show the minute attention displayed by M. Belhomme, by whom the observations are recorded. "Two bleedings were carried on at the same time, the vessels used being the shape of inverted cones. Robillard, a man aged thirty-five, of athletic constitution, had made a violent exertion, in consequence of which he suffered in the lumbar region. He was seated. *Right arm,*

* *Observations faites a l'Hôtel Dieu, pendant l'Année* 1823, *sous les Yeux de* M. le Professeur Recamier, *sur le Sang et la Couenne Inflammatoire*, par J. E. Belhomme; *precedées de Reflexions generales*, par A. Duges.—(Revue Medicale, Mars 1824.)

—opening in the skin one line and a half, in the vein one line; jet of little strength, continuous for three inches, and lasting three minutes. *Left arm*,—opening in the skin two lines, in the vein one line and a half; jet very strong, rapid, continuous for seven inches, and lasting two minutes. Result: *Right*, no buff; clot of the ordinary consistence. *Left*, very thin layer of buff; clot and serosity as on the right."—By this experiment it is shown, that the blood flowing from a large opening, with a powerful jet, afforded a buffy coat,—slight, it is true, but yet distinctly marked,—and which was entirely wanting in that which flowed from a narrower aperture and less forcible jet. This circumstance held good as the general result in a numerous series of experiments. All the observations of M. Belhomme were conducted in the same minute and careful manner. Convinced that the blood always participates in the alterations of the solids, he devoted particular attention to its condition in patients labouring under various diseases, and in pregnant women; but, equally persuaded of the influence of certain accidental circumstances in producing certain appearances, he very properly thought it necessary to begin his examination with persons, either in health or but very slightly indisposed. He found that, in all, certain states favour the formation of the buffy coat:—viz. 1st, an aperture of moderate size; 2d, a rapid and continuous jet; and 3d, receiving the blood in a narrow vessel. With a view to greater accuracy, he made exact measurements of the vein and of the skin, of the jet of blood, the time during which it flowed, and the vessels into which it was received. In the language of M. Belhomme, an aperture is said to be moderate when its length is a line; large, when two lines; and very large, when three. He points out the necessity of distinguishing between the opening in the skin and in the vein, the former being always larger. He found that the materials of which the vessels were made, had no influence on the phenomena presented by the blood which they contain; but, in general, the one last filled had a more distinct buffy coat.

After having ascertained the influence of external circumstances, M. Belhomme inquired into the effects of physiological and pathological causes. On this subject he informs us, that, even in the healthy state, the buffy coat is generally formed under the circumstances we have above alluded to as favourable to its development. In pregnant women, as is well known, there is a general tendency to this phenomenon; but a remark which, so far as we know, is peculiar to M. Belhomme, is the existence of a peculiar odour in the blood of pregnant women, exactly resembling that of the placenta, when recently expelled. This phenomenon, which is stated to be constant, might be of use in cases of doubtful pregnancy. In subjects labouring under inflammatory and febrile attacks, a great disposition to the formation of the buffy coat was manifested; but even here it was modified, or overcome, by external circumstances. A patient, who had a relapse of inflammation of the chest, with expectoration of blood and much fever, was bled, in the sitting posture, in both arms: one vein was very large, and the aperture made into it was three and a quarter lines in length, from which the blood flowed in a rapid continuous stream: on this a very firm buff

formed, between five and six lines thick. On the other side, the aperture in the vein was only half a line, from which a fine but rapid jet flowed; but no buffy coat resulted. It is true that analogous observations have been made before, but they are more precise and satisfactory in the Memoir before us than in any preceding one with which we are acquainted.

Some observations of an interesting nature on the pathology of the blood have likewise been made in this country, by Dr. STOKER,* of Dublin, and Dr. SCUDAMORE.† These we shall here extract, with a view of laying before our readers all that has recently been done on this subject.

The former of these gentlemen says,—"The explanation for some time given of such appearances on the blood, (viz. the buffed surfaces,) is incompatible with these facts, thus detailed, and the opinion involved in that explanation, that slow coagulation was caused by the violent agitation the blood had undergone previously to its being drawn, may perhaps be also questioned. Instead, therefore, of attributing these appearances of the surface merely to the subsiding of the red particles during the slow condensation of the lighter parts, we are, I think, warranted in supposing that an altered and unhealthy state of the blood, exceeding the effects of mere agitation, takes place in the course of circulation, either from want of due preparation of the fluids at the two chief sources of supply, and of the subsequent changes these fluids should undergo in their passage through the pulmonary, sanguiferous, and hepatic systems, or from the injurious effects of diseased functions in the organs of sanguification.

"The colour and external characters which designate various kinds of buffy coat, being also found to indicate the particular functions engaged in producing them, afford additional arguments in favour of the foregoing opinions. In simple pneumonia, for example, the coat on the blood is generally of a colourless white; but, when tinged, it is with bright red, the depth of the tunic seldom exceeding a few lines, and to this probably it is owing that the cupping on the surface of such blood is generally remarkable; the thin and tenacious film contracting as it forms, and drawing towards the centre the external margin at the circumference of the less contractile crassamentum.

"In simple forms of hepatic disease, on the contrary, the buffy covering is generally darker through its whole substance than in pneumonia, and is externally yellow. It occupies a large proportion of the solid part of the blood, and is not often cupped: when it is cupped, there is reason to suppose that the lungs are partly engaged.

"In diabetic complaints, which there is so much reason to believe originate in imperfect digestion, or insufficient preparation of chyle, it is well known that, when blood is drawn, it is often found covered over with a whitish milky-like fluid.

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* *Pathological Observations. Part I. on Dropsy, Purpura, and the Influenza, &c. &c.* By WILLIAM STOKER, M.D. &c.—Dublin, 1823.

† *An Essay on the Blood, &c. &c.* By CHARLES SCUDAMORE, M.D. F.R.S.—London, 1824.

"I am the more desirous to direct the attention of medical observers to these circumstances, as, if I judge rightly, they will be found to afford effectual aid, not only in reasoning how the surfaces in question were produced, but also in discriminating between the organs affected, with a view to remedy. The observations, indeed, which have been made here, being confined merely to the surface of the blood, embrace but few of the advantages in pathological investigation, which, I conceive, a more general attention to the condition of all the parts of the serum and coagulum would contribute.

"In a conversation which I lately had the pleasure of holding with Mr. Todd, professor of anatomy and surgery in our College of Surgeons, I learned with satisfaction that the opinions which led to the foregoing observations on the diagnostic characters of the buffy coat, coincided with his extensive experience; and he stated to me a fact which appears to me highly important, that, in passing through the wards of the hospitals of the House of Industry, to which he has been for many years surgeon, he could, on inspecting the cups of blood taken in different diseases, be able frequently to pronounce what organs were primarily or chiefly engaged in those who were bled; that with the white and cupped surface having indicated the lungs to be the seat of disease, and that with the dark yellow colour and equal surface, the liver.

"From the difficulty of ascertaining any infallible diagnostic between certain forms of pulmonary and hepatic diseases, (which have so many symptoms alternately or in common,) the foregoing observations will, if found applicable in practice, be justly appreciated.

"In making these remarks on the various kinds of surfaces presented by blood under certain circumstances, I do not wish to be misunderstood as concurring in the opinion that the buffy coat is always indicative of inflammation,—an opinion which does not accord with my experience: on the contrary, I have often witnessed much of that sort of appearance on the blood drawn in certain kinds of dropsies, when the patient had neither increased action of the vessels, nor any unusual sensation of pain or heat in any part; but, on the other hand, in certain conditions of the mucous lining of the cavities or of the viscera, when all other characteristics of inflammation were present, no buffy coat appeared on the blood after being drawn.

"I am inclined, from what I have seen in such cases, to think that, when inflammation is confined to the mucous membranes, the blood is not generally buffed; and that when it is in a sizy state, that then the texture of the liver or lungs is directly engaged, or affected by sympathy with the parts concerned, so as to influence the condition of the functions in these organs."

Dr. Scudamore informs us, that—"It may be stated as a general rule, that blood coagulates in the shortest time, accordingly as it is of high specific gravity. Such is the blood of a strong and healthy person, as abounding most in red particles, which constitute the heaviest part of the blood. Mr. Hunter, in speaking of the red globules, remarks that 'their use would seem to be connected with strength, for, the stronger the animal, the more it has of the red globules.' The fibrin, also, be-

longing to such healthy blood is more dense than that of blood in disease; and hence the real explanation of a quick coagulation.

"The very marked difference of time in which the blood coagulates, accordingly as the stream from the orifice is fast or slow, appears to me to warrant the conclusion which I have stated, that the commencing part of the process of coagulation,—namely, the escape of carbonic acid, does take place more readily when the blood flows very slowly.

"It appears that rest, merely, does not assist the coagulation of the blood. We see in how remarkable a manner cold delays coagulation of the blood in the basin; and how slowly it takes place when confined in a vessel of the living animal.

* * *

"The proportion of fibrin and its quality, as having an influence on the coagulation of the mass, is a point of material consideration. We must keep in view that the solidification of the fibrin is the essential cause of coagulation. The process is promoted by heat, 'for two reasons.' The carbonic acid is driven off sooner, and the solidification of the fibrin is evidently assisted. The temperature required to render the fibrin almost immediately solid, varies according to the density of the fibrin. Thus, in an example of moderately sizy blood, collecting the fibrin while liquid and mixed with the serum, I found that it required a heat only of 120° to render it solid, and the serum 140°. The density of this blood was but little below that of the most healthy blood, for the patient was bled for the first time; but in another example, in which the fibrin very greatly predominated in quantity, the same degree of effect required a heat of 130° for the fibrin, and of 160° for the serum. This blood was of very low specific gravity. The patient had been bled several times, and was much reduced.

"In attempting to explain the coagulation of the blood, I should be induced to say that it depends on a new condition of the fibrin, which can only exist fluid in a state of intimate mixture with red particles, serum, and carbonic acid gas. Except in circulation or in living vessels, the fibrin will not maintain an union with the serum, although it does continue blended with the red particles, either when extravasated in the living body, or when taken from the vessels. It is therefore the property of the fibrin to become solid when separated from the several principles just stated, constituting in union the mass which we call blood. It will perhaps be asked, how does it happen that such blood as contains the largest quantity of fibrin coagulates the most slowly, when coagulation depends upon the fibrin? I do conceive, that the larger the proportion of fibrin is in healthy blood, as its proper constituent, the more rapid will be its coagulation.

"I wish to observe, also, that such blood, which I advert to as the most healthy, contains the largest proportion of red particles, as may be deduced from its high specific gravity. Indeed, in blood of perfect health, its constituent parts may be supposed to exist in a constant relative proportion to each other, and that every considerable difference from such proportions ought to be viewed as a deviation from the best standard.

"To the circumstance chiefly of a large proportion of fibrin as

belonging to health, I am disposed to attribute the immediate coagulation of the blood of the sheep; in which I have found the proportion of fibrin to 1000 grains of crassamentum 7.29 grains. The mean proportion in eleven examples of human healthy blood, was 3.72 grains. In answer to the question just now proposed, I contend that, when the fibrin is in great excess, it is less dense than in healthy blood, and takes the solid form more slowly. As explained in my experiments, the excess is so abundant in very sizy blood, that the larger proportion remains in the upper part of the basin, in admixture with the serum; and hence its slower coagulation. Also that portion which falls down with the red particles is less dense than natural, and coagulates rather slowly. When the fibrin is in great excess, it would seem that the red particles cannot blend themselves with the whole quantity as in ordinary coagulation.

* * *

"The colour of the blood as it flows from the vein, is influenced by different causes. If the ligature have been kept on the arm for some time, the blood which first flows will appear very dark. In obstructed respiration, particularly in a fit of asthma, the blood presents an almost black appearance, in consequence of its difficult transmission through the lungs, and consequently imperfect oxygenation. In quick respiration, as in phthisis pulmonalis, the blood drawn usually appears very florid. I believe that, in all inflammations, the blood drawn from the veins is more florid than natural, unless the circulation is obstructed, so that the blood passes with difficulty from the arteries to the veins.

"We may soon judge of the density of the blood on its being received into the basin. The appearance to the eye gives some information, but we are chiefly instructed by the time in which it coagulates. Under the head of *specific gravity*, I have given examples to show that the heaviest blood coagulates the most quickly. It is well known that blood which will furnish the buffy coat in a great degree, in the course of a few minutes presents a watery appearance, and the finger, being applied to the surface, is not stained with blood. We may also notice, before the blood becomes quite coagulated, whether it has a frothy appearance, as indicative of a large proportion of fixed air, taking into the account that, if it has passed in a full projecting stream, more atmospherical air will be entangled than if it flowed down the arm.

"I believe that these are the chief circumstances to be noticed in the immediate appearance of the blood, when passing, and just received into the basin.

"The blood should be received in different cups; and the breakfast-cup is the most suitable size. They should be put by in order, all in the same situation as to temperature, and not disturbed, so that we may be enabled to draw some useful inference of the effect produced on the circulation during the operation of venesection, by the relative appearances of the different portions of blood. In deciding upon the mere presence or absence of the fibrinous coat, we must particularly refer to the quick or slow stream in which the blood has flowed. In active inflammation of the fibrous textures, the formation of the buffy coat cannot be prevented, because the fibrin in the blood is in such excess; but, when inflammatory action of the circulation does not much prevail, we

shall learn more of the nature of the blood from examining its texture, than from merely viewing the surface of the coagulum. I consider that the texture of the coagulum, and its degree of contraction, indicate more of the actual state of the heart and arteries, than the mere presence or absence of the fibrinous coat. In the examination of blood taken away by cupping, we have to form our judgment chiefly from the texture of the coagulum; as to the eye, it almost constantly presents an uniform appearance. In general terms, I may state, that a firm texture of the blood points out a strong action of the blood-vessels, so as to give a presumptive sign that the bleeding has been proper; and, vice versa, if the coagulum be remarkably loose in texture, we should particularly question the propriety of repeating the operation. I may further remark, that, when the clot possesses uniform firmness, and has its edges turned inwards, we may conclude that the blood-vessels act more strongly than when it is soft in its texture throughout, and having a thin and flabby edge. The extreme toughness of the buffy coat itself, and this contrasted with the soft texture of the inferior part of the coagulum, is matter of familiar observation.

"The quantity of serum which appears in the basin depends chiefly on the more or less firm contraction of the clot. It most abounds when the blood presents the buffy coat, because the strong contraction of such a clot forces out the serum.

"Respecting the external appearance and qualities of the serum, I am not aware that very material conclusions are to be drawn. Its density cannot be judged of by the colour.

"Experiment 84 shows that the palest serum had the highest specific gravity. When the bile has found its way into the circulation, it tinges the serum strongly. If a person be bled shortly after the dinner meal, the serum appears milky. I believe that this appearance is owing to the recent introduction of chyle into the circulation; and it seems to me to warrant the idea, that several rounds of the circulation take place before sanguification, or the complete conversion of chyle into blood, is effected. * * *

"It is undoubtedly true, as a general circumstance, that in the same proportion that the buffy coat of the blood appears to abound, the clot being remarkably cupped, as it is expressively called, with edges inverted, so does the inflammatory diathesis prevail; and, indeed, short of such strongly-marked evidence, in those cases in which the signs of internal inflammation are obscure, the appearance of the blood, as exhibiting the buffy coat or being wholly free from it, or in its texture, as being remarkably firm or the contrary, very materially serves to assist our diagnosis. In forming such diagnostic opinion, I must again desire that reference be made to all the circumstances which have an influence on the particular formation of the coagulum.

"An increased rate of the circulation, merely, does not occasion a larger proportion of the fibrin to be found in the blood, as is proved by Experiments 83 and 84. On the contrary, indeed, in this example, the largest proportion of fibrin was found in the blood drawn before the exercise. The increased proportion of serum, together with its higher

specific gravity, concurring with the diminished proportion of fibrin, is a fact worthy of observation.

"It requires the continuance of disease to give rise to the buffy coat. It will not be found in blood drawn in the first few hours of inflammatory action. I have just now mentioned the negative effect of exercise; but, also, it seldom happens that the blood is sizy in simple continued fever, or certainly not in the beginning of the fever. We may expect to find this condition of the blood in those diseases which are attended with muscular wasting; for example, in diabetes, and, above all, in phthisis pulmonalis. Dr. Watt, in his work on Diabetes, mentions the remarkable prevalence of the buffy coat in this disorder; and, probably, was on this account encouraged in his views of treating diabetes by frequent bleeding. In the early period of pregnancy, the blood usually presents some degree of buffy coat; and, indeed, it has frequently been regarded as a diagnostic of pregnancy. I attribute its appearance to the degree of muscular wasting which takes place under these circumstances; agreeably to my former explanation, of the fibrin being retained in excess in the circulating blood, instead of being distributed in the usual proportion to the muscular fibre.

"It deserves further discussion, how far the appearance of the buffy coat is to be taken as a fixed practical rule for the use of the lancet? It appears to me that, while, on the one hand, it is to be received as strong evidence of the inflammatory diathesis, we must, on the other hand, be careful not to be too much influenced in the repetition of the venesection by such appearance of the blood. In many diseases, it will continue to predominate under circumstances of such great debility, that it would be highly injurious to pursue the practice of bleeding. Even to the dying hour of the consumptive patient, the blood does not fail to exhibit the buffy coat, more or less considerably. In the treatment of severe pleurisy, its continued appearance does not alone warrant incessant bleedings. We must always make a comparative estimate between the action of the vessels arising from disease, and power of the constitution. Whatever may be the medical treatment, a little time is required to allow a change of diathesis to take place; and although, during the state of active symptoms, the free use of the lancet is the *sine qua non* of practice, we are not to consider that the taking away blood constitutes the only means by which we can alter its condition; or, more properly, by which we can remedy the disorder of the system. Medicine, suitable diet, repose, and a little time, will accomplish much. In prescribing venesection according to real symptoms and circumstances, we shall most probably avoid error; and it is incumbent on us to take a careful guidance from the mere continued appearance of the buffy coat. I repeat, that it will frequently be found connected with such serious debility of the constitution, that, to continue to rob the vessels of blood on account of its being sizy, would be dangerous to the life of the patient.

"It is obvious that we are led to the further use of the lancet when the buffy coat of the blood appears, because it is so commonly associated with inflammatory action; but otherwise, according to the explanation which I have attempted, that the excess of fibrin in the blood is simply

owing to a suspension of its ordinary distribution to the fibrous textures, we should not, in a theoretical view of the question, consider depletion from the vessels as indispensable. A very free and continued employment of bleeding in acute rheumatism is seldom a successful practice, although it is notorious that every cup of blood would present the appearance of the buffy coat."

M. BELLINGERI has made *the state of the blood, with regard to its electric phenomena* in different diseases, the subject of an Essay,* in which he states, that in the phlegmasiæ there is an evident diminution of electricity, which again returns as the disease loses its intensity; while the contrary holds good with regard to chronic affections. The blood, as it flows from the vein, does not always evince positive electricity: on the contrary, in some cases of severe inflammation, it becomes negatively electrified; and, where a buffy coat forms, there the electricity of the blood, as it flows, will be found inferior to what it is during health. But the buffy coat never forms in any case where there is a degree of electricity superior to that which belongs to the state of health: when the buffy coat does form, the blood retains the degree of electricity which it had in the veins longer than under other circumstances. In general, at the commencement of a bleeding, the blood is of deeper colour, more dense, and less electrical, than what flows afterwards: in other respects, the blood taken from a vein has a tendency to the equilibrium of the surrounding atmosphere.

A well-marked example of that singular disease to which the name of *anæmia* has been given, has recently been recorded by Dr. COMBE,† who gives the following well-drawn picture of the complaint:

"It was in the month of July, 1821, that I was first consulted by Alexander Haynes, the subject of this case, on the nature of his complaints. Even at that time I was much struck by his peculiar appearance. He exactly resembled a person just recovering from an attack of syncope: his face, lips, and the whole extent of the surface, were of a deadly pale colour; the albuginea of the eye bluish; his motions and speech were languid; he complained much of weakness; his respiration, free when at rest, became hurried on the slightest exertion; pulse 80, and feeble; tongue covered with a dry fur; the inner part of the lips and fauces were nearly as colourless as the surface. He says that his bowels are very irregular, generally lax, and that his stools are very dark and fetid; urine reported to be copious and pale; appetite impaired; of late, his stomach has rejected almost every sort of food; has constant thirst; he has no pain referable to any part, and a minute examination could not detect any structural derangement of any organ. He is forty-seven years of age; was born, and has spent the greater part of his life, in the country, engaged in agricultural employments; for a few years has been servant to a corn-merchant, where his duties are neither

* *Memorie della Reale Accad. delle Scienze di Torino*, t. 24.

† *History of a Case of Anæmia.* By J. S. COMBE, M.D. Fellow of the Royal College of Surgeons, Edinburgh.—(Transactions of the Medico-Chirurg. Society of Edinburgh.)

laborious nor unhealthy. He is married, and has no family; leads a regular and temperate life; has enjoyed perfect health since childhood, and has never been blooded. He was advised to use some medicine to correct the state of his bowels, to confine himself to a light diet, and to take gentle exercise."

Tonics (particularly iron), mercury, opium, and other remedies, were employed, and he appeared for a short time to improve; but soon after he relapsed, and, gradually sinking, died in January 1822. On post mortem examination, effusions were found in the chest and abdomen, and a rough irregular ossification, an inch in length, imbedded in the folds of the dura mater, near the vertex; but by far the most important appearance was an almost bloodless condition of every viscus and structure in the body, with the exception of the spleen, which was very soft, and the contents of which "turned out as from a sac," on pressure being applied. The heart, when cut into, was pale, and did not stain linen when rubbed upon it; no blood exuded from the spleen, on cutting into it; the kidneys were nearly bloodless; the arteries universally empty, as were the jugular, humoral, and femoral veins; the whole muscular structure, in every part of the body, exhibited the same pale colour as the heart, which seemed as if it had been macerated for many days in water.

A very lengthy paper has been published by M. GASPARD, on the subject of *putrid diseases*,* in which he attacks BROUSSAIS by a side wind, and earnestly invites practitioners to return to the old treatment of fevers and putrid diseases, by means of antiseptics, acids, astringents, bitters, aromatics, and cinchona. The general manner of reasoning, or rather of discoursing, upon the subject, is this:—he injects water, in which putrid animal matter has been allowed to steep for a longer or shorter period, into the veins of animals; and he finds vomiting, purging, fever, &c. produced; in which symptoms he finds an exact resemblance to typhus, dysentery, and similar complaints. The next step is to immerse animal substances in different fluids, as vinegar, wine, muriatic acid, &c.; and the result is, that they are preserved "almost indefinitely." In the last place, the first experiment is repeated; and, after the animal has had putrid matter poured into the veins, some of the correctives are injected after it, and lo! some of the patients are thus restored. We shall give the first example in the Memoir of each of these experiments; which, we think, will serve to justify the remarks made in a preceding part of this paper.

Exp. I.—"The 27th of March, 1823, I injected into the right jugular of a lamb, aged two months, half an ounce of water, fetid, but still transparent, in which some veal had macerated and rotted during some days. The first symptoms which resulted were pain and frequent acts of deglutition during the injection; vain efforts to vomit; and, in a quarter of an hour, loss of strength, inability to stand, respiration somewhat embarrassed, repeated alvine evacuations, abundant flow of mucus from the nostrils, (which continued until death); next, fever,

* *Second Memoire, Physiologique et Medical, sur les Maladies Putrides.* Par B. GASPARD, D.M. &c.—(Journal de Physiologie, t. iv. No. 1.)

small and very frequent pulse, increasing salivation, alvine evacuations, liquid and watery, repeated every instant, but without fetor, accompanied with tenesmus and painful retraction of the abdomen; *at length, long agony, with continual moans and occasional howls, and death seven hours after the injection.*" Of the examination after death, it is sufficient to say, that the stomachs were sound, but the small intestines were inflamed; the smallest laceration or incision into their parietes giving vent to black fluid blood; the lungs spotted black in different points, and showing serous effusion, both into their texture and the cavity of the pleura; the left side of the heart, the liver, spleen, &c. having numerous spots of ecchymosis.

Exp. III.—"I preserved for a very long time, and almost indefinitely, some meat in whey, weak vinegar, cream of tartar, wine, very dilute mineral acids, carbonic acid, chlorine, cinchona, gentian, sulphate of quinina, &c."

Exp. IX.—"On the 19th of February, I injected into the jugular of a very small dog, at first half an ounce of putrid water, with meat steeped in it, which excited great agitation, with efforts to vomit, followed by a great calm and species of syncope. Afterwards I introduced slowly, and at five times, two ounces and a half of a limpid, but very strong, decoction of red bark. Now the animal, after these different injections, was in a state of stupor, arthenia, and paralysis; which, however, gradually went off a little, so as to allow him to move about, with staggering, for nearly half an hour. At the end of this time, complete failing of strength returned, and he lay upon the side; flaccidity of the members, and soon after very laborious respiration; belly painful and elastic; sero-mucous running from the anus; and then, at the end of an hour, a liquid, yellow, gelatinous stool. After this his condition became pitiable; belly more and more painful, great dyspnœa, redness of the conjunctiva, eyes tearful, stiffness of the neck and limbs of the right side, *continual howling (cris en maniere de hurlements renouvelés a chaque instant).* Two hours after the experiment, I injected again, very gently, and at four times, two ounces of the same tepid decoction of cinchona; but the dog did not appear to experience any other effect or change than the cessation of its cries. As to the rest, it continued in a state of extreme debility, without, however, having any other alvine evacuation; respiration being long performed in sobs, and the animal at length dying three hours after the injection."

Such of our readers as are interested in the subject will find, in the Memoir alluded to, many additional instances of animals similarly tortured.

The opinion that the various forms of varioloid eruptions are but modifications of each other, seems to gain ground; and we find an interesting letter on this subject, from Dr. STOKER, of Dublin, to Dr. THOMSON, of Edinburgh,* stating the result of numerous observations in confirmation of this doctrine. He is of opinion that all the pocky

* *Letter to* JOHN THOMSON, M.D. *Edinburgh, containing Observations on the Occurrence of Small-Pox after Small-Pox and Vaccination.* By W. STOKER, M.D. Dublin.—(Edinburgh Med. and Surg. Journal, January 1824.)

exanthemata are derived from genuine small-pox, and conjectures "that it is only the peculiar virus of each which can give protection from the various forms which they assume after having once emanated from the parent-stock; forms which characterize them in each future transfer *ad infinitum.*" Dr. Thomson likewise informs us,* that the general results of his later observations and inquiries have tended to confirm the opinions which he formerly expressed with regard to the advantages of vaccination; the frequent occurrence of small-pox a second, or even a third time, in the same individual; and the identity of all the varioloid eruptions. He adds, that he has been led to believe that the *test-pock* of Mr. BRYCE bears the same relation to the primary cow-pock that secondary small-pox does to primary: in short, that cow-pox modify cow-pox, as small-pox modify small-pox.

MEDICINE (*including* THERAPEUTICS *and* MATERIA MEDICA).

A general History of Medicine has recently been published in Germany,† which is favourably spoken of in some of the foreign Journals.‡ It is stated to be taken from the best sources, and to be executed with zeal and talent. The author begins by exposing the state of medicine among the Chinese and Indians, from the earliest times; proceeds to details regarding the science among the Egyptians; and afterwards passes on to the countries of Europe.

We have likewise to notice among historical records an account of the *epidemics* which have at various times prevailed in different parts of the globe.§ The volume is divided into three parts: the first containing the history of epidemics from the most remote antiquity up to the period of general migration; the second, from this time to the crusades; and the third, from the crusades to the invention of printing.

A paper of some interest, connected with the history of medical science, will be found in a recent Number of a respectable American publication.|| One of the circumstances enumerated as retarding the progress of the healing art, or even giving to it a retrograde course, is *the multiplicity of books.* As reviewers, who are compelled to peruse a great proportion of the medical works which issue from the press, we cannot but admit that it is surprising how few of the volumes which pass under our notice are really marked by novelty or genius; how few there are who study nature; how few, *in making a book,* think any thing more is requisite than to borrow from those who have gone before them.

It cannot be expected that we should often meet with new diseases, and the only thing having any claims of this kind is the account of a

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* *Lib. cit.* p. 92.

† *Geschichte der Heilkunde.* Von I. F. R. HECKER.—Berlin, 1823.

‡ *Leipz. Lit. Zeitung,* and *Bulletin des Sciences Medicales.*

§ *Chronik der Seuchen, &c.* Von T. SCHNURRER.—Tubingen, 1823.

|| *A comparative View of the State of Medical Sciences among the Ancients and Moderns, its Revolutions in different Periods of the World, and an Enumeration of some of the Errors which check its Progress.* By JOHN STEARNS, M.D.—(Philadelphia Journal, February 1824.)

singular affection, attended with hiccough, which occurred to M. MIKISCH, of Horsens.* This practitioner was called upon to attend ten individuals, under the following circumstances. They were attacked with rigors, perspirations, lassitude, and head-ache; bad taste in the mouth, and oppression in the epigastric region; some were constipated in the bowels, while others were affected with diarrhœa. *After a few days, they all had hiccough,* which at first was slight and with long intervals, but afterwards became more frequent and more severe, coming on every hour, and sometimes every half hour. If the patient heard another person hiccough, he began again, even although his own paroxysm might only have just ceased. During these fits, the patients presented a shocking appearance, the respiration being very difficult, and the countenance becoming purple from the interrupted state of the circulation; sometimes the rupture of a vein in the nostrils or fauces gave rise to a considerable loss of blood; and in other instances the patients had epileptic seizures, and rolled on the ground. During the continuance of the disease, none of them were affected with fever, but all were reduced to great weakness; some had a yellow circle round the eyes, as in the commencement of jaundice; the tongue was loaded and brown, and the urine deposited a copious sediment: in some females, the menses were suppressed.

M. Mikisch regarded the cause of this malady as depending upon some circumstance connected with the atmospheric temperature, or with some error of diet. In February much snow had fallen, after which the wind had veered to the south-west, and a complete thaw suddenly followed. The melted snow filled the wells, and was used by the peasants; but no noxious ingredients could be detected in it by chemical analysis. The bread was not bad; and their beer, though not well brewed, was such as the peasantry in Jutland usually employ: their cattle were healthy. Under these circumstances, M. Mikisch directed the patients to be separated, and placed in warm, well-ventilated situations; all spirituous liquors were withdrawn, (they had been using brandy,) and their beer was improved by the addition of bitters, and by attention to the process of brewing. Evacuants were next had recourse to: when their strength admitted, the patients were bled both generally and by leeches; in other cases, cold lotions were applied to the head, and warm fomentations to the limbs; emetics, purgatives, and mercurials, and afterwards bitters and antispasmodics, were administered, as indicated by circumstances.

The disease had broken out in March, and by the middle of May all the ten patients were restored to health. One woman continues to be attacked with hiccough every time her temper is ruffled, or when she remains long without eating; some of the others have a paroxysm after any excess in drinking.

The following case of what may be called *chronic hiccough,* we regard as possessed of some degree of interest, as connected with the preceding narrative. A young man, aged twenty-six, witnessed a scuffle

* *Bibliothek for Lager.*

between two individuals, by which he was much agitated; he had an epileptic fit, and afterwards was attacked with hiccough, which lasted for thirteen months. It came on ten or twelve times every day, and each fit lasted about half an hour: he was free from it during the night. After trying all the usual remedies without avail, recourse was had to sulphuric acid, of which a drachm was added to a pint of water, and three spoonsful taken every three hours. By this treatment he was speedily cured.*

The *croup* has long been known in this country as depending upon inflammation of the mucous membrane of the larynx and trachea, although its pathology would appear to have been less generally admitted in France, if we are to judge from a recent publication, in which much pains is taken to demonstrate the inflammatory nature of the disease.† Although, therefore, this view of the croup cannot be considered as possessing any features of absolute novelty, yet the work deserves to be mentioned in this place, from its containing a more complete history of the disease than any other with which we are acquainted. The author, M. BLAUD, divides the croup into three varieties,—viz. that in which a false membrane is found; that in which inflammation ends in suppuration; and that in which the mucous secretions of the part are not altered, but merely increased in quantity. All these three varieties may exist together, and this he designates by the formidable name of *laryngo-tracheite-myxa-pyo-meningogene.* The symptoms are described with accuracy; and, among other circumstances, it is particularly remarked, that the sonorous or croupy cough and respiration do not belong to the variety in which a false membrane is thrown out, more than to the others. The method of treatment recommended by M. Blaud for the most severe form of the disease is remarkable for its activity, and consists chiefly in copious bleeding.

Perhaps we may be expected to take some notice, in this place, of a recent work on Dropsy, by M. PORTAL.‡ We shall only say, that we read it with the intention of making it the subject of an article in our Foreign Review, but found it so utterly destitute of any claims to novelty, or even to accuracy, that we conceive we best consult the reputation of the veteran author by letting it fall into oblivion as speedily as may be.

Among the very few novelties in the department of Therapeutics, we have to introduce to our readers, is the system of Dr. HAHNEMANN, under the name of *homœopathia*, which is used to designate the method of treating diseases by means of active medicines in doses of extreme minuteness. The fundamental principle of this theory is, that different complaints are cured by means which produce symptoms analogous to those of the disease: and that the remedy is appropriate in

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* *Annali Universali di Medecina,* Novembre 1823.

† *Nouvelles Recherches sur le Laryngo-Tracheite, comme sous le Nom de Croup,* Par P. BLAUD, D.M.P.—Paris, 1823.

‡ *Observations sur la Nature et le Traitement de l'Hydropisie.* Par M. PORTAL, &c. &c.—Paris, 1824.

proportion to the strictness of the analogy between its effects and the disease it is intended to cure. Thus, a chronic disease may be arrested by an acute one, and vomiting stopped by an emetic: in short, the principle is *similia similibus curantur*. Dr. Hahnemann, proceeding upon this idea, argues that, as an atom of vaccine virus is sufficient to give protection against small-pox,—or an atom of any other morbid poison, as syphilis, is capable of giving rise to a disease similar to that in which itself has originated,—so atomic doses of active medicines, provided they be the proper contra-stimulus to the disease, are regarded as preferable to the same medicines in larger quantities. There appears much of hypothetical assumption in these doctrines, so far as we have yet been made acquainted with them; but numerous plausible cases are cited,* and we are promised further details in a system of Materia Medica, by Hahnemann.

We have alluded to the views of M. Hahnemann, however, chiefly for the purpose of introducing one of the most important illustrations of his doctrines,—one which, rejected in France, and almost unknown in this country, is nevertheless regarded by many in Germany as second in importance to the discovery of vaccination alone: we allude to the alledged efficacy of *belladonna as a preventive of scarlatina.* We are told that the author of this system, having observed that the drug in question, when taken in very small doses, produced symptoms analogous to those of scarlatina, was hence led to the conclusion that it was the proper antidote to the disease; a conjecture which at first was regarded, even in Germany, as too improbable to merit serious attention. But, lest our readers should still think thus of Dr. Hahnemann, and his claims to be regarded as a second Jenner, we shall lay before them the opinion of Professor KOREFF, in a letter to M. LAENNEC; an opinion which, he informs us, is founded on the observations of sixteen years.†

"Observation clearly proves," says he, "that the belladonna, taken for some time, either in powder or in extract, produces, especially in infants, a redness of the skin, which is sometimes transient, but at others more durable; dryness of the mouth, with a sense of heat in the throat; dilatation of the pupil; anxiety; and occasionally swelling of the submaxillary glands: symptoms having a great resemblance to those which accompany the eruption of scarlatina. The effect of the belladonna has also this in common with scarlatina, that neither of them produce the redness of the skin invariably, whilst the symptoms about the throat are always present. I confess to you, however, that all these analogies did not appear to me sufficiently strong to persuade me that in this plant was really to be found a preservative against scarlatina, similar to that which the cow-pock affords against variola. It was not till I had received the authority of the celebrated Soemmering, who informed me

* By Dr. WIEDMANN, in HUFELAND'S *Journal der Practisch Heilkunde*, 11 cahier, 1823.

† *Sur l'Emploi de la Belladonne contre la Contagion de la Scarlatine; Note communiquée a* M. le Prof. LAENNEC, *par le* Prof. KOREFF.—(Bulletin des Sciences Medicales, Avril 1824.)

that he had obtained the most satisfactory results with it when the disease raged epidemically, that I determined to employ it. This malady, accompanied by the most unfavourable symptoms, and having entirely changed its usual character, was at that time producing ravages almost as fatal as the contagious typhus. I then, for the first time, had the happiness to protect from this dreadful contagion almost all those who took the belladonna with a little perseverance, and of these there were many thousands. Since that time I have never lost sight of this discovery, which becomes the more valuable as the scarlatina has increased during the last thirty years, both in violence and extent, in many countries; and I have always found the same effects in different climates, and in epidemics of opposite characters. Many other physicians have equally confirmed the preventive powers of this plant, and the German Journals are daily filled with proofs of a benefit which, with respect to some countries, equals that of vaccination. In France, the capital and the provinces of which appear less subject to these fatal epidemics than Germany, Swisserland, the Tyrol, Poland, and the north in general, less attention has been given to this discovery, and it has been rejected,—it must be said too lightly, and without any sufficient examination, as may be seen in the article *Belladonna* in the Dictionnaire des Sciences Medicales. I only remember a single observation on this important subject, by Dr. MEGLIN,* who gives an account of a trial which he gave to this preservative during an epidemic of scarlatina at Colmar, and which confirms all the assertions of the German physicians. The absence of present danger is, perhaps, the cause of this indifference towards a discovery, which, important in itself, might also be fruitful in results applicable to other diseases. At present, however, I shall confine myself to an account of the results which have been ascertained, (by repeated observations, and by a great number of individuals placed in very different circumstances,) without incurring the reproach of having proceeded in a manner not sufficiently rigorous.

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"The powder mixed with sugar, or the extract made very carefully from the juice of the recent plant, are employed after the following formulæ:—Extract of belladonna, three grains, dissolved in an ounce of cinnamon water. Powder, or root of belladonna, two grains, mixed with ten drachms of white sugar, divided into sixty doses. From half a dose to a whole one is given to a child, from six months to two years old, four times a-day; to children from three to six years old, from a dose to one and a half; to those from six to nine, two to two and a half; to those from ten to twelve, three, to four and a half. Of the solution, a drop is given for every year of the child's age, once a-day and fasting. Observation has shown that, when the epidemic is very fatal, or the intercourse with the patients very frequent and intimate, it is prudent to increase the dose a little. It has not yet been possible to determine, in a satisfactory manner, the length of time which is necessary to eradicate by this remedy, the susceptibility of the contagion. Every thing leads

* *Nouveau Journal de Medecine*, 1821.

us to believe that the remedy, if used during a time too short to ward off the contagion, moderates very much the malignity of the disease. We know for certain that the remedy does not permanently overcome the disposition to scarlatina; and it is necessary to resume its use on every recurrence of an epidemic. We have always observed that the most intimate communication with the sick does not produce the disease, provided the medicine has been employed eight or nine times previous to being exposed to the contagion, and continued up to the period of desquamation; a circumstance very important to nurses. It appears more certain to begin with rather strong doses, in order to guard against the first impression of the contagion, and to diminish the quantity after a few days. No sensible effect has been observed to follow the continued use of this small quantity of belladonna. Up to the present time, neither season nor locality, nor any other circumstance, has appeared to diminish the preservative effect of this plant."

After remarking that the belladonna does not exercise the same power over miliary scarlatina, he proceeds:—" Do not believe, my learned colleague, that these results have been too lightly deduced, or from a small number of individuals, or from epidemics of little violence. It is from entire provinces,—from cities affected with this terrible scourge, —from epidemics the most fatal, in all seasons, and in localities the most diversified,—on individuals of every age and of every condition, that observations have been made with the greatest accuracy, and have led to the above results.

Belladonna has been long used by CHAUSSIER in cases of rigidity of the os uteri, in the following manner:—Rather more than two drachms *(huit grammes)* of the prepared extract are softened with an equal quantity of distilled water, and incorporated by trituration with an ounce of hog's-lard or simple cerate. In order to secure all the benefit which this means is capable of affording, it is necessary that this preparation be applied directly to the orifice of the uterus. To effect this, he has contrived a small syringe, which, in place of having a pipe, is rounded at its extremity, and has an opening large enough to admit the point of the little finger. The piston is pulled back a little, then about the size of a small nut of the ointment is introduced at the upper orifice; the syringe is directed by the finger to the mouth of the uterus, the piston is pushed home, and the ointment forced out; being of a soft consistence, it liquifies and spreads over the parts. At the end of thirty, or at most forty, minutes, the os uteri becomes soft and relaxed, to such an extent as no longer to present any resistance to the efforts to dilate it, or to the contractions of the uterus itself. This method was extensively employed by the late Madame LACHAPELLE, and is likewise commended by M. LEGRAND, the present midwife in chief at the Maison d'Accouchement.*

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* *Journal Universal des Sciences Medicales*. 96 cahier.

† *Traité de la Methode Fumigatoire, ou de l'Emploi Medical des bains et douches de Vapeurs.* Par M. RAPOU, D.M.P.—Paris, 1824.

A very elaborate work has been published by Dr. Rapou, on the therapeutical applications of *baths and vapours,*† in which it is almost unnecessary to say that the "*methode fumigatoire*" is preferred to every other. There are, however, many interesting remarks scattered in the work, and many useful hints with regard to the effects of different medicinal substances, when thus employed in the form of vapour. It would, *a priori*, be natural to suppose that the body would be rendered particularly susceptible of cold by the vapour-bath, but experience has proved, on the contrary, "that when the movement of reaction from the centre towards the circumference is powerfully established, we may be exposed to a very severe degree of cold, without experiencing any disagreeable impression or the slightest inconvenience." Thus it is that the Russians are in the habit of rolling themselves in the snow, the moment they leave an atmosphere heated to a high temperature. The determination to the skin, particularly if the bath has been accompanied by frictions, continues for several hours, and gradually diminishes; and Dr. Rapou, who has tried the experiment on his own person very frequently, says that, on quitting the vapour-bath in winter, the cold air always afforded him a degree of pleasure, similar to that which results from a cool breeze in a hot day; and that he "has always been obliged to put on less warm clothing during several days." The general effects resulting from the action of heated vapour on the human body, are more minutely and satisfactorily explained than in any other work with which we are acquainted; and the following may be taken as some of the most important conclusions.

"1. That, in certain nervous temperaments, the vapours of camomile and mint evidently act as antispasmodics. 2. That vapour impregnated with mugwort, wormwood, and rue, applied as a bath to the middle of the body, has always recalled the menses, after all other therapeutic agents had failed. 3. That the vapour of roses has a directly sedative effect, and is of great use in certain inflammatory irritations of the skin. 4. That the vapour of elder-flowers possesses the same properties in a much higher degree, and is one of the most powerful means that can be applied to counteract acute pain, or the intolerable pruritus of many cutaneous eruptions. 5. That vapours impregnated with the narcotic principle of poppy-heads, the leaves of the nightshade; dry fumigations with extract of henbane, and more particularly with opium, speedily produce a sedative effect, in cases where other means have been employed without avail; but that, to insure this effect, the vapour must be employed at a mild temperature. Animal substances seem to have been but little tried by Dr. Rapou, but he has borrowed assistance very largely from the mineral kingdom: among these, we find sulphuretted hydrogen spoken of in terms of high commendation, particularly in cutaneous affections: "directed at a gentle temperature on an inflamed part, it speedily diminishes the pain, redness, and swelling, manifestly moderating the capillary circulation of the skin. Muscular or nervous pains, which obstinately resist other means, yield to its influence, especially if connected with inflammatory irritation: thus, acute, herpetic, and similar eruptions, derive the most essential benefit from it."

We observe that the application of *iodine* in the form of vapour has been suggested, for which, indeed, its volatility would appear to render it particularly proper; but we are not aware of any satisfactory experiments upon this part of the subject.

Some useful practical remarks on *the treatment of obstruction of the bowels*, have been made by Dr. MAXWELL, of Dumfries.* They relate chiefly to the effect of *injections*, variously modified, in administering which, he is of opinion that the patient ought to be placed in such a position as shall allow the bowels to hang "nearly at right angles with the spine." Dr. M. informs us that, by attending to this circumstance, he threw up three and a half gallons of warm water, accurately measured. He regards the general idea, that the valvular structure between the colon and ilium can prevent the passage of enemata, properly administered, is incorrect; and believes, on the contrary, that, in a healthy state of the intestines, any quantity of water may be made to pass from the anus to the mouth. He has found, however, that injections of water are sometimes insufficient to remove the obstruction; in which case, he has recourse to inflating the bowels with air. The first instance in which he tried this experiment is thus described:

"A piece of cork, nearly flat, was placed on a male catheter, at three inches from the point, which was introduced into the rectum. The patient being placed on his back in bed, and the cork pressed firmly against the anus, the bowels were gradually inflated, the top of the catheter being stopped with the tongue during inspiration. When the air had occasioned considerable distention, it was readily expelled, but nothing followed. Pondering upon my disappointment, it occurred to me that the sudden distention of the colon might press so much upon the ilium, that the air could not enter it. I resumed the operation, blowing slowly, and with the left hand pressing the air forward along the colon into the ilium. When the distention began to give much pain, the air was allowed to escape, and in about an hour it was followed by copious soft stools."

Dr. Maxwell mentions ten other cases in which he employed this plan with success; to insure which, he recommends that the patient should lie on the back, the distention be made gradually, and the air be pressed along the colon into the ilium. In two instances where, from the supervention of symptoms of palsy, it seemed probable that the constipation arose from a paralyzed state of some portion of the alimentary tube, and where the bowels remained insensible to the operation of the usual stimulus of cathartics and enema, Dr. Maxwell employed electricity, by passing brisk and repeated shocks through the abdomen: in both cases the bowels acted, and in one the patient ultimately recovered.

Various cases have recently been published, in which the *oil of turpentine* has been administered with advantage in *purpura hæmorrhagica.*

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* *Observations on Constipation, with Cases.* By W. MAXWELL, M.D.—(Edinb. Med. and Surg Journal, Jan. 1821.)

They rest on the respectable testimonies of Mr. THOMPSON, of Whitehaven,* and Dr. WHITLOCK NICHOLL.†

Some examples of the utility of the same drug in *puerperal fever* have been lately published by Dr. JOHNSON, of Chatterton.‡

The oil of turpentine has likewise been strenuously recommended in the treatment of *neuralgia* of the sciatic and other nerves of the extremities, in a Memoir by MARTINET, written expressly on the subject.§ It is maintained that the virtues of the drug reside in the volatile oil, and not in the resin which it contains; that they are unconnected with any purgative, diuretic, or diaphoretic effect; but that it acts directly upon the nerve, exciting a sensation of heat along its course. It is recommended to be given in doses of a scruple three times a-day, in some aromatic syrup,—a larger dose is useless, if not hurtful; severity of pain and well-marked exacerbations are the most favourable circumstances for its exhibition; and six or eight days are generally sufficient to effect a cure. Of thirty-six cases recorded by Dr. Martinet, twenty-six were completely cured, seven were relieved, and three only derived no benefit from the turpentine: they were affected with disease of the hip-joint, which proved fatal.

The same physician has likewise published some remarks upon the doses of *sulphate of quinina*, which he recommends to be administered from the commencement in quantities of twenty, thirty, or thirty-five grains.

A case is related by Dr. BEATTY, in which a child of four years old, affected with *ascites*, was cured by the *pyrola umbellata*, after other diuretics had failed.‖

"It was, however, proposed, as a last resource, previous to resorting to the operation, that we should try the pyrola umbellata, described by Dr. Somerville in the fifth volume of the Medico-Chirurgical Transactions. I directed an ounce of the plant to be infused in a pint of boiling water for an hour, and half a pint of the liquor strained off, to be divided into six draughts, one to be taken three times daily. The result was such as to exceed the most sanguine expectations: the urine, almost immediately, became natural in appearance, and was increased to three or four times its usual quantity; the alvine discharge, for the first time since her illness, recovered its natural colour and consistence. Her general appearance was sensibly improved, and her spirits began to return."

The volume above referred to contains several examples of *hæmatemesis* successfully treated with *ipecacuanha*, by Dr. SHERIDAN, who says—"These cases, with the two others which I observed in the country, have made such an impression on me, that I never can hereafter

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* *London Medical Repository*, November 1823. † *Ib.* June 1824.

‡ *Philadelphia Journal*, February 1824.

§ *Memoire sur l'Emploi de l'Huile de Terebenthine dans la Sciatique et quelques autres Neuralgies des Membres.* Par L. MARTINET, D.M.P.—Paris, 1823.)

‖ *Transactions of the Association of Fellows and Licentiates of the King's and Queen's College of Physicians in Ireland.* Vol. IV.—Dublin, 1824.

hesitate for a moment to have recourse to the ipecacuan emetic in hæmatemesis. I do not mean by this term a mere vomiting of blood, which may be produced by various causes, and in some cases of which emetics might prove very prejudicial, but the true hæmatemesis, which I think will always be sufficiently distinguished by the symptoms which have been above described."

In our last Historical Sketch, we laid before our readers some interesting observations made by Dr. HELLER, on the use of *hydrocyanic acid* in *diseases of the heart;* we have now to mention a useful caution with regard to inhaling the vapour which fills the upper part of a phial containing a portion of this very powerful narcotic.* A distinguished chemist in Paris, in arranging his laboratory, perceived that a phial, half filled with the hydrocyanic acid of Scheele, contained some dark-coloured flakes, and, conceiving that it had become decomposed, he was about to throw it away. Desirous, however, of ascertaining its exact position, he took out the cork, and applied the phial to his nose. At this instant he was seized with a great tightness in the chest, and felt three different times successive shocks directed towards the heart, *(secousses precipitées vers le cœur;)* he became pale with general weakness, and a sensation of pricking all over the skin, which ended in stiffness all over the body. This last symptom was particularly remarkable in the legs, which he constantly endeavoured to bend; but he performed these movements so incompletely, that the limbs resumed their former position as often as he attempted to overcome the force which kept them extended. The vapours of ether and ammonia were applied to his nostrils; he was carried into the open air, and every effort made to recall his sensibility. At this time, Dr. Heller having arrived, he found the pulse extremely contracted, and so slow that it only beat thirty-six in the minute. The patient, however, had not lost his perception: on the contrary, he was so much agitated as to render it difficult to compose him. The skin was rubbed with cloths dipped in ether and hartshorn, and he took half a cup of very strong coffee every half-hour. The circulation, notwithstanding, continued oppressed, and the pulse not rising above forty. Under these circumstances, three spoonsful of oil of turpentine were given in the coffee, and repeated twice within two hours. The distress of the patient, however, lasted during the whole of the ensuing night; but next day general lassitude and depression were all that remained. Unfortunately, however, inflammation of the stomach and bowels followed; and he ultimately recovered with great difficulty, and after long and rigorous treatment. The latter part of the evil, however, is frankly attributed by Dr. Heller to the strong coffee and the turpentine, which were so liberally administered, and the impropriety of which he fully acknowledges.

It is rather singular that this accident should have made so little impression on the narrator as it appears to have done; for he goes on to

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* *De la Necessite de ne point trop insister sur l'Usage interieur des Excitans dans l'Impoisonnement par l'Acide Hydroganique.* Par M. HELLER, &c.—(Journal Generale, Mars 1824.)

inform us that he went, in the course of last summer, to the Veterinary School at Alfort, where he made numerous experiments with prussic acid on animals affected with hydrophobia; and that, having for some time held in his hand a phial half filled with acid, which had been prepared by Robiquet two days before, he took out the cork, and held the phial under his nostrils. Symptoms followed resembling those above mentioned, consisting in a sense of pricking along the mucous membrane of the nostrils, fauces, and larynx; giddiness, weakness, trembling, and general sense of cold. He was made to inspire ammoniacal vapours, by which he was a little restored, and went into the open air, but retained much weakness and oppression during the rest of the day.

Dr. Heller states, that during two years that he has administered prussic acid to numerous patients, of all ages, of both sexes, and different temperaments, he has sometimes seen debility and slowness of the pulse follow its use in too large doses; and occasionally even coldness of the extremities, and a general numbness or stiffness; but that he has always found frictions with warm flannels steeped in ammonia, exposure to fresh air, and making the patients move about, sufficient to relieve the unpleasant symptoms.

The interesting part of Dr. Heller's paper consists in the important caution to chemists, not to inhale too freely the vapours which collect in the upper portion of a phial which is partly filled with prussic acid. The assertions he makes with regard to the treatment adopted in France and England,—viz. that oil of turpentine is generally given as an antidote, is entirely without foundation. In this country, at least, when an over-dose of prussic acid has been taken, practitioners are accustomed to have recourse to brandy and ammonia, as recommended by Dr. GRANVILLE and Dr. MURRAY.

The *pulvis antimonialis* of the London Pharmacopœia was made the subject of experiment by Dr. ELLIOTSON some time ago, with a view of ascertaining its real effects and proper doses. We are inclined to think his observations have not met with the notice they deserve,—at least, they have not had any influence with those to whom we are indebted for the New Pharmacopœia. Dr. F. HAWKINS, apparently ignorant of Dr. E.'s remarks upon this subject, has published a paper* in which he has arrived at similar conclusions: indeed, he asserts that the effects attributed to this medicine are not to be produced by ten times the usual dose; and he informs us, that he now begins by exhibiting half a drachm at once. One case is mentioned, in which two scruples were given twice a-day for several weeks: "no function was in any degree affected by it." In another instance, so much as one drachm was exhibited night and morning, without any sensible effect. It is proper to remark, that Dr. H. procured some pulvis antimonialis from Apothecary's Hall for the purpose of experiment.

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* *On the Dose of the Pulvis Antimonialis.* By F. HAWKINS, M.D. &c.—(Edinb. Med. and Surg. Journal, April 1824.)

SURGERY.

Operative surgery has now nearly achieved all that can be expected from it. The ligature of the aorta, and the internal and external iliacs, —of the subclavian and carotid arteries,—the excision of the jaw,—amputation at the hip-joint,—such are the triumphs of modern surgery; and most of them have now been performed more than once or twice, and some of them ceased to be even objects of much curiosity. We may now, therefore, have leisure to pause over the accounts of these splendid achievements; the wonder and admiration which they have excited may be presumed to have in some measure subsided, and we may be allowed to inquire whether some of these operations may not be undertaken occasionally upon light grounds; and whether we ought not rather to lament the imperfect condition of a science, that renders such mutilation, and such formidable measures, necessary for the preservation of the patient's life. The ligature of a large arterial trunk implies that we cannot cure an aneurism,—that we neither know how to detect its nascent symptoms, or how to put a termination to its progress. Excision of the lower jaw teaches us that we know nothing of the nature of cancer, and of that class of diseases which are nearly allied to it. We know neither the kind nor condition of constitution most prone to the attacks of this formidable disease; and still less are we acquainted with any remedies that control its advances. Amputation at the hip suggests to our minds many melancholy reflections; for it reminds us of many formidable diseases which we are thereby anxious to get rid of, because we cannot cure them.

These suggestions must necessarily arise in the mind of every surgeon who has passed over the first few years of his practical career, and, although humiliating, they are necessary,—nay, they never were more necessary to be encouraged than at this moment; for the splendour of an operation is apt to dazzle the imagination, and overwhelm the judgment, of the young and sanguine, and to turn them from the true object of surgical science—the cure of the disease.

The object we propose by these remarks, is not that of depreciating the value of any of these great triumphs of our art; but it is to repress the ardour that we too often see exhibited by the young surgeon to perform these operations, without due consideration or caution, and to impress upon him the necessity, the humanity, and the superiority, of dispensing with the knife upon as many occasions as possible, and of restricting these severe operations to great and urgent occasions only. We are quite sure that hundreds of arms have been removed from the shoulder-joint inconsiderately and needlessly; and the same mania for the hip-joint operation, we fear, is now likely to produce an equal number of victims to that still more unwarrantable mutilation,—unwarrantable, excepting in some very rare and uncommon instances. On this subject we beg to refer our readers to a late controversial work by Mr. C. Bell, and which we shall have occasion to notice again presently.

We now proceed to describe some operations which have been recorded within the period now under review; and we shall commence by Mr. Syme's case of *amputation at the hip-joint*, which, as far as

regards the operation itself, was successful, since the patient lived a month after its performance, and the wound was nearly healed; ascites, the consequence of diseased liver, appearing to be the immediate cause of death. Mr. Syme's patient was a lad, aged seventeen years, who had been afflicted with necrosis of the thigh-bone for upwards of two years, and who had resisted the performance of amputation, which had been recommended by his surgeon, until his constitution had evidently become broken down by the effects of the disease. Having decided upon the removal of the limb, Mr. Syme thus proceeds:

"The next question was—at what part of the limb should amputation be performed?

"In the earlier periods of the disease, nothing forbade removal below the trochanters; but now the case was very different.

"I have said that the swelling could be traced distinctly to within an inch of the trochanter major, consequently it must reach the trochanter minor; and every anatomist knows that, if the bone were cut higher than this latter process, the capsular ligament must be opened. Besides, granting that it was possible, by sawing obliquely through the spongy tissue which constitutes the bone between the trochanters, to remove all the sensibly swelled part without injuring the joint, still, considering the duration and spreading disposition of the disease, it was not probable,—I should rather say it was not possible,—that any portion of the bone could be sound or disposed for healthy action: and, even if this difficulty could be got over, there would still remain another of equal magnitude,—I mean the formation of sufficient flaps.

"Plenty of skin might be got; but it was not likely that the thin, exhausted, and distended muscles of the thigh would show much inclination for union, even if they could be secured in sufficient quantity to cover the bone; and this the most hasty examination was sufficient to prove altogether out of the question. * * *

"On the 2d of September, assisted by my much esteemed and highly respected friend and instructor, Mr. Liston, and in presence of Dr. Abercrombie, Dr. Anderson, of Leith, Dr. Scott, and Mr. Marshall, surgeon to the forces, I performed the operation in the manner following.

"Having, with some difficulty, placed the patient upon a table, so that the affected limb was perfectly free, and ascertained that Mr. Liston was ready to make pressure when and where required, I introduced a narrow knife, about a foot long in the blade, which was sharp at one edge only, at the proper place for transfixing the limb; but being prevented, by the bent position in which, owing to long habit, the patient obstinately retained it, from passing onwards in the direction of the tuberosity of the ischium by the neck of the femur, I lost no time in the repetition of fruitless attempts, but instantly changed my plan.

"Without removing the point of the knife, I brought down its edge obliquely, and, by a sawing motion, quickly cut back, in a semicircular direction, to the tuberosity of the ischium, up along the femur and round the trochanter major, so as to form very speedily identically the same flap which would have resulted from the plan I meant to have followed.

"While Mr. Liston covered the numerous cut arteries with his left hand, and compressed the femoral in the groin by means of his right, I

gathered together all the mass of undivided parts on the inner side of the thigh with my left hand, and then insulated the neck of the bone by passing the knife close past its lower surface. I now cut close down along the bone for some way below the trochanter minor, and lastly made my way outwards obliquely, so as to form a good internal flap.

" Mr. Liston holding aside the flaps, I made a single cut with my long knife upon the head of the bone, which started with a loud report from its socket, as soon as abduction was performed. Finally, I passed the knife round the head of the bone, cut the triangular and remaining portion of capsular ligament, and thus completed the operation, which certainly did not occupy, at the most, more than a minute.

" I then proceeded, without delay, to take up the arteries, which were tied by our very promising pupil, Mr. Thomas Evans.

" As soon as the femoral, which had been completely commanded by pressure in the groin, was secured, Mr. Liston relaxed his hands, in order that we might form some estimate as to the size and number of bleeding vessels; and then, had it not been for thorough seasoning in scenes of dreadful hemorrhage, I certainly should have been startled, prepared as I was to expect unusual vascularity, owing to the extensive action so long carried on in the limb.

" It seemed, indeed, at first sight, as if the vessels which supplied so many large and crossing jets of arterial blood could never all be closed. It may be imagined that we did not spend much time in admiring this alarming spectacle. A single instant was sufficient to convince us that the patient's safety required all our expedition; and, in the course of a few minutes, hemorrhage was effectually restrained by the application of ten or twelve ligatures.

" The flaps were now brought together, and retained in contact by means of five or six stitches. Some dry caddis was laid over the wound; and, lastly, I applied a single-headed roller obliquely round the body and stump, moderately tight, so as to afford proper support to the flaps; and then we lifted into bed the patient, who was wonderfully little exhausted.

" The operation was performed at twelve o'clock; and, during the remainder of the day, nothing occurred of much interest, except occasional vomiting, which I thought, at the time, might be attributed to the effects of an opiate given about two o'clock, on account of pain and restlessness."*

We need not detail minutely the reports of the progress of the wound towards recovery. About a month after the operation, the wound was nearly healed, all the ligatures having been withdrawn the week previously; when, as we before said, death ensued from ascites.

The case is closed by some remarks from the author upon the objections usually urged against this operation, and which, we readily agree with him, cannot hold good when a decided necessity for its performance is made out. In the above instance, Mr. Syme is of opinion that the common mode of amputation could not have been adopted with any chance of success. We are very unwilling to put our opinion against

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* *Edinburgh Med. and Surg. Journal*, Jan. 1824.

that of a gentleman, who not only is eminent in his profession, but has the advantage of having examined the patient, which we of course did not, and whose justification (the diseased bone itself) is in his possession; and which, having been seen by his professional friends, (neither few in number, nor little entitled to respect,) have all agreed as to the necessity there was for the entire removal of the bone; still we trust we shall not be accused of over-caution, if we say that a more lengthy and accurate description of the condition of the bone would have been more satisfactory to our minds, since the circumstance of its being *thickened* higher up than the trochanter minor is at best but equivocal.—We shall have occasion to revert to some observations of Mr. Syme's upon amputation generally, in a future part of this paper.

Amputation at the hip-joint has also been performed lately by Sir ASTLEY COOPER, with a successful result; but we have no particulars of that operation upon which we can rely, and therefore we shall wait the publication of the case itself. We understand that there were only four vessels secured, and that the operation occupied altogether thirty-five minutes.

The next great operation we have to record is *excision of nearly the whole of the lower jaw*, by M. LALLEMAND;* and, terrific as the detail of the case is, it presents many points of interest to the surgeon; and we cannot too much praise the presence of mind, and the fertility of expedient, which the operator exhibited under circumstances so alarming. The subject of this operation was a labourer, named Louis Guillot, aged forty-seven, of a robust constitution, born of healthy parents, who had, in the year 1820, three or four red pimples on the lower lip, containing some purulent matter, which was discharged whenever he scratched them; greenish scabs succeeded to these pimples, which, falling off, left ulcerated surfaces, which finally spread and swelled up, and formed a large fungous mass. After two years and a half of treatment which proved unavailing, he came to the Hospital of St. Eloi, on the 9th October, 1823. The whole lower lip, the chin, and about one inch of the cheek and upper lip of the left side were transformed into a kind of cauliflower growth, the excoriated surfaces of which bled readily, and were covered with an ichorous matter, of a very fetid odour. The neighbouring parts of the cheek were indurated and thickened for an extent of five or six lines round this fungous growth. The slightest touch produced exquisite pain, which sometimes came on without any apparent cause. One of the submaxillary glands was enlarged to the size of a pigeon's egg. The periosteum, felt behind the alveolar border, was thickened and hard. It was evident that nothing but an operation could relieve this man, who readily consented to it; and, on the 11th of October, it was performed in the following manner:

The diseased parts were included within two curved incisions, beginning on the upper lip, six lines from the commissure of the right side to one inch on the left side, and terminating towards the middle of the

* *Journal Complementaire*, Mars.

thyroid cartilage. Very convex above, they encroached upon the sides of the cheek, just anterior to the masseter muscle; below, they were nearly straight,—thus representing, pretty exactly, the shape of a heart upon cards. The arteries, as they were divided, were compressed by the fingers of assistants. On the left side, the tumor extended the whole length of the periosteum to the masseter; a portion of the insertion of which muscle was detached, and the bone was sawed off to within an inch of the angle opposite the interval between the two molar teeth; but the bone could not be entirely separated, on account of the root of one of the teeth, which was obliged to be divided by the chisel and mallet. On the right side, M. Lallemand expected that the saw would meet with no impediment, as there was only one of the molar teeth remaining; but, the stumps of the other being still in the alveoli, obliged him again to have recourse to the chisel. The body of the jaw being then reversed forwards, the soft parts were divided; the portion of the skin of the neck included between the two incisions was then divided; and, just as this was complete, the patient appeared to make great efforts to respire, immediately afterwards sinking from his chair, his head thrown back, and fell on the ground, in spite of the assistants, in a state of insensibility. But, although he still continued insensible when removed to his bed, the blood was pouring forth with violence from twenty vessels; and, therefore, M. Lallemand justly concluded that this was not a syncope. The efforts the patient made to respire induced the operator to think that the pharynx might be loaded with clotted blood; but, on inserting the finger into the mouth, it appeared that the tongue was forcibly drawn to the back of the mouth, and the posterior face of the larynx rested against the vertebral column. The section of the genio-glossus, genio-hyoideus, and mylo-hyoideus muscles, their antagonists being undivided, had caused this inversion of the respective situations of the tongue, the larynx, and trachea.

M. Lallemand draws a very vivid picture of the alarming situation in which he was placed. Fortunately he had cauteries heated, and he applied them over the bleeding surface, so as to restrain the hemorrhage. He then extended the incision downwards; laid bare the trachea below the cricoid cartilage, and opened it. In an instant the air rushed into the lungs, the chest became dilated, and the man awoke as if from a profound sleep. Want of space obliges us to be concise in our detail. The wound was dressed with charpie, and drawn together with straps of sticking-plaster. Suppuration was established on the fourth day; on the seventh, the eschars formed by the cautery were separated, leaving a healthy surface beneath; and finally, on the 4th of December, 1823, Guillot was completely cured; there remaining only, of this great loss of substance, a space of two inches between the two extremities of the jaw.

This case, which we have been obliged to abridge, extends through several pages, and, though highly creditable to M. Lallemand, we think it hardly offers any encouragement to repeat so formidable an operation.

In the Archives Generales (January 1824,) we have an account of *the extirpation of the parotid gland*, by M. Beclard: the disease

was a cancerous ulceration of the gland. "The disease had commenced eight years previously; but, though indolent for a long time at first, it had latterly increased rapidly, and become the scene of lancinating pains. It was fixed; and, when he entered the hospital, it was of considerable elevation. It raised the lobe of the ear above, apparently involving the cartilaginous portion of the auditory canal; downwards it extended more than an inch below the angle of the jaw; backwards, it adhered to the sterno-mastoid muscle; and anteriorly, it covered a great part of the masseter. It was ulcerated in two places.

"*Operation.*—The tumor was inclosed by two curved incisions, one inferior and one posterior. That part situated over the masseter was easily dissected off. Then an attempt was made from below upwards; but a projection of its substance plunged deeply behind and beneath the internal pterigoid, the removal of which would, the operator thought, endanger hemorrhage. M. B. therefore decided to dissect upwards, by striking the bistoury into the structure of the tumor itself, on a level with the projection, while the instrument divided the cellular tissue connecting it with the adjoining parts. Half the inferior circumference of the cartilage contributing to form the auditory canal, was removed by the first dissection. Numerous arteries were tied at this stage of the operation; and M. Beclard continued the extirpation of the remainder of the tumor. When nearly the whole scirrhous mass was removed by successive slices, a large jet of arterial blood announced the section of the external carotid, or one of its large branches. A finger was put on the place whence the jet issued, and the vessel was seized with the forceps, while a needle with a double ligature was passed around it. An assistant tied the vessel above and below the wound in it, which was lateral. The artery was then held forward out of the way, whilst the surgeon completed the extirpation of great part of the tumor. One small projection of the tumor, placed before the cervical vertebra, was left, on account of its proximity to the internal jugular vein. M. Beclard passed two ligatures beneath this part, by means of a needle, tying the one at the superior, the other at the inferior extremity. The wound, which formed a tremendous chasm, was dressed forthwith. Nothing particular occurred for the first days after the operation. All that side of the face was bereaved of expression. The right eye remained open, and, in consequence of being dry, became inflamed. The suppuration was going on kindly, and healthy granulations covering the wound, when, on the twelfth day, the patient experienced rigors, followed by fever. Erysipelatous inflammation attacked the neighbouring parts, and delirium supervened. When this subsided, taciturnity ensued, and ultimately mental alienation, ending in death, better than three months after the operation; the wound being closed except in one place near the ear, where it was again assuming the cancerous appearance.

"On dissection, the pia mater was found injected, water in the ventricles, some pus in the meatus auditorius. The external carotid artery was found to terminate in cellular membrane, resulting from cicatrization of the wound; the internal jugular vein was obliterated at the same place."*

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* *Medico-Chirurgical Review*, June.

In this operation we cannot find any thing to commend: considering the extent of the disease, its attachments, &c. we do not think that any prudent surgeon would have ventured upon its removal, because it was (unlike the case just recorded) nearly impossible to suppose that the whole of the diseased mass could be extirpated. This proved to be the case; and, after three months of suffering, the man died, the wound being closed, *except in one place near the ear, where it was again assuming the cancerous appearance.*

M. Maréschal has given us an account of *the extirpation of a fungous tumor of the upper lip*, by M. Roux, in which the ligature of the external maxillary, the right suborbital, and the left coronary arteries, was first performed. The detail of this case is most tediously minute, and is preceded by some reflections upon varicose or aneurismatic tumors, which however present no point of novelty. The patient, a young female, seventeen years of age, was admitted into La Charité, in November 1823, with a considerable tumor, which had existed eighteen months, on the right side of the upper lip. It was not preceded by any congenital mark upon the skin, but showed itself suddenly, and did not attract the particular notice of the patient until it acquired some size. At the date above mentioned, the whole right side of the upper lip and the corresponding cheek, formed a soft tumor, of a violet colour. The edge of this tumor was not well defined on the side of the cheek, so that it was difficult to decide where the alteration of structure terminated. It presented pulsations evident to the eye, and still more so when included between the fingers and thumb. Besides this pulsation of the whole mass, several isolated pulsations, indicating the course of arterial branches over the part, were visible. Compression upon any of the principal arteries of the face produced no change in these appearances; but, if all of them were simultaneously compressed, the tumor was sensibly lessened. Upon this was founded M. Roux's determination of tying the arteries we have mentioned above; after which he proposed to employ pressure upon the tumor, by means of two metallic plates adapted to the shape and size of the tumor, and which were acted upon by a screw, so contived as to diminish or increase the pressure at pleasure. On the 30th of November the arteries were tied, and the tumor lost all its pulsation, excepting a slight one on the posterior surface of the lip, near its edge. The machine for compression was then applied; and on the sixth day the apparatus was removed, when the lip, the tumor, and the neighbouring parts of the cheek, were found in a state of high inflammation; but which, after some days, subsided, and then it was perceived how much had been gained by the ligatures and the compression, both with regard to its extent, form, and *maniere d'etre;* and, therefore, M. Roux proceeded to complete the cure by extirpation, which was performed on the 15th of January, and the patient was in a state to leave the hospital on the 31st.

We are inclined to think that this case might have been better managed. It is evident that the cases of Mr. Travers and Mr. Dalrymple gave the hint to M. Roux for the ligature of the arterial branches; but why was the metallic compression employed? It evidently

did no good, and what could it be expected to have done? It brought on pain, inflammation, and very nearly suppuration; and then it was taken away. We think that, in this country, bolder measures would have been pursued than the mere tying the three arteries: at any rate, there could have been no reason to have prevented the excision of the tumor as soon as the supply of blood had been cut off by their obliteration.

Operations for the cure of *popliteal aneurism*, by tying the femoral artery, are now so common as not to merit particular detail; and therefore we need do no more than observe, that Mr. EASTNER has published an account of a successful case of *the ligature of the crural artery*, in the Transactions of the Medical Society of Copenhagen.

Our continental neighbours afford us another remarkable instance of their bold and successful application of surgery, in *the extirpation of an immense tumor*, composed of the diseased integuments of the penis and scrotum. The following account will be read with interest, and perhaps with astonishment.

"A baker of Perpignan had some preputial excoriations, which were considered to be chancres, but they did not yield to mercury; and he enlisted in the gendarmerie on the confines of Spain. Riding produced engorgement of the prepuce, which at length ensheathed the whole penis and scrotum. In six years the tumor had advanced till it hung down below his knee.

"The patient was admitted into the chirurgico-clinical department of Montpellier, where Professor DELPECH recognized in the tumor the characters of elephantiasis; and, having determined that the testicles and the penis were sound, and that there were no other symptoms of the same affection, he conceived the following plan of operation:—1. To make two semicircular flaps with the sound skin on the two sides of the neck of the tumor, each one commencing at the corresponding inguinal ring, and ending before the anus. 2. In the interval of these two flaps, to form a third with the sound skin of the anterior portion of the neck of the tumor. 3. To uncover, right and left, the testicular cords; to ascertain if there was any hernia; to follow, then, the course of the cords in the tumor down to the testicles; to isolate these last, with their cords, and to place them upon the abdomen. 4. To slit open, from below up, the swollen sheath as far as the glans; then to dissect and denude the penis, and to place it on the abdomen. 5. To take away all the tumor in dissecting the perineum. The operation was accomplished, and lasted fifty minutes, and the tumor weighed sixty pounds. The testicles were enveloped in the two lateral flaps, which went to form a new scrotum. The penis was inclosed in the middle flap, which formed a new sheath. In six weeks after, every thing was cicatrized. The only inconveniences which followed the operation were a deep-seated spasm, relieved by two doses of opium the same day of the operation, and a slight fever the five following days. A small part of the anterior flap perished by gangrene, so that the penis has no prepuce. The scrotum is well formed, and the testicles move freely within it. Pro-

fessor Delpech was under the necessity of digging down eight or ten inches through the immense mass of fat which formed the tumor, before he discovered any vestige either of cord or testicle. This was the occasion of considerable detention in the progress of the operation."*

Amongst the record of operations, we must not forget to mention Mr. SLEIGH's improved *recto-vesical operation*, and Dr. BOWEN's method of *depressing the cataract into the vitreous humour;* both of these publications we have already noticed at some length. Mr. Sleigh's operation has not been performed, we believe, upon the living subject; and we are not aware that Dr. Bowen's plan has yet been put to the test by any of our London oculists, though, from the success that has attended it in the numerous instances cited by Dr. Bowen, it is certainly highly deserving of a trial.

We now proceed to notice a few interesting surgical cases that have appeared within the last half-year; and we must observe, that a solitary instance of success in the treatment of a surgical disease is more worthy of our attention than any single medical case can be, because what the surgeon has once effected may be done again; the good produced is directly traceable to the means employed, and there is no room to suspect that the efforts of nature have performed a cure, which the physician ascribes to the action of some new or favourite remedy.

The first case we have to mention is recorded by Mr. MACLURE, of Glasgow, and in which that gentleman's perseverance, skill, and attention, are very conspicuous. The facts of the case were these:—A man who, from previous disease, *had lost the lower segment of the glans, and was afflicted with a fistulous opening in the perineum,* of many years' standing, applied to Mr. M. A bent probe could be introduced by the fistula backwards into the bladder; and a catheter or bougie might be introduced by the orifice of the urethra, and carried down to the obstructed part, which appeared to occupy about an inch and a half. The plan adopted for the removal of this obstruction was the use of the caustic bougie, which was persevered in for many months, through many circumstances of difficulty and discouragement, but finally with the result of re-establishing the integrity of the canal. The fistulous opening was not, however, closed; and the ulterior means which Mr. Maclure intended to have adopted for the cure of the fistula, were either the actual cautery, or denuding the sides of the sore by means of a cutting instrument, or the tagliacotian operation: circumstances, however, compelled the man to quit Glasgow, before either of these trials could be made.†

In the same work there is recorded a *case of sloughing of the bladder after parturition,* in which the patient was restored to health, and saved from the misery of a permanent fistula between the bladder and vagina, by the steady application of a tent composed of sponge, placed

* *Anderson's Quarterly Journal of the Medical Sciences,* No. 2.
† *Edinburgh Medical and Surgical Journal,* April 1824.

in the vagina as nearly as possible in contact with the perforation of the bladder, and a flexible catheter, fixed by suitable bandages, and passed into the bladder, where it was suffered constantly to remain.

We are aware that there is nothing very novel in the application of such obvious means of cure; but we mention this case, as well as the former one, with pleasure, because they evince great patience and steadiness of purpose on the part of the practitioner, and demonstrate how much good these solid qualities may effect, when under the guidance of a sound judgment. Little more than a month was sufficient to effect the cure of this fistula; and an examination, five months afterwards, proved that the patient remained perfectly free from her complaint, and had no inconvenience either in retaining or discharging her urine.

A nearly similar case is described by Dr. CUMIN, of Glasgow, in the January Number of the same Journal. The result was equally fortunate, and the means employed were in effect the same.

In the Edinburgh Journal, we also find a history of *amputation*, performed for the cure of *tetanus traumaticus*. The operation was not successful; but Mr. LISTON expresses his opinion that, had it been resorted to earlier, it would have been attended with a happier result. We do not think that general experience warrants this expectation; and, as far as our observation has extended, we have not found that amputation has been able to arrest the progress of this formidable disease.

A more than usual number of works relating to various practical points of surgery has been published within the last half-year: we shall notice the most important of these publications.

Mr. SYME and Mr. LISTON both appear as advocates for *a new mode of performing the operation of amputation.** The former gentleman gives us rather an exaggerated picture of the usual mode of amputating by the circular incision; at least, we do not recognize the picture he has drawn as applicable to the practice of the metropolis. He recommends the adoption of the flap operation, not only in the leg but in other parts, and describes the method of performing it as follows:

"When the flap operation is performed, the soft parts may be cut either from without inwards, or from within outwards. The first of these methods was the one practised at the first introduction of the plan, and is still, I am informed, employed with great dexterity by that skilful surgeon Langenbeck; but the second is, I think, preferable, as it is done more easily, and seems to give less pain to the patient. In both cases, the object of the surgeon is precisely the same,—viz. the formation of proper flaps, by cutting more or less obliquely, according to the thickness of the soft parts. As I have said before, no general directions can be given for determining the extent of the incisions; I shall, therefore, content myself with describing the manner in which they may be executed most advantageously.

"Lisfranc recommends a long, very narrow knife, sharp on both

* *Edinburgh Medical and Surgical Journal*, January.

edges; but I think the one used by Mr. Liston better calculated for the purpose. It is about six inches in length and five-eighths in breadth, thin and blunt in the back, except for an inch from the point, which is very sharp; the back is straight, and so is the belly, except about an inch and a half from the point, which is slightly convex.

"The dimensions which I have stated are fully sufficient for the arm and fore-arm, the leg, and all amputations in children; for the thigh of an adult, a greater length will, of course, be required.

"The surgeon, grasping the limb with the left hand, at the place where it is to be removed, ascertains the situation of the bone by means of his thumb. He then introduces the knife over the bone at that part where he wishes to apply the saw, and, perpendicularly to it, he passes close by its side, and so on until the point appears directly opposite. This finishes the first part of the operation, or the transfixion, as it is called; after which he cuts his way outwards, in a line forming an angle with the bone, more or less acute according to circumstances, so as to complete one flap.

"He then embraces the remaining undivided parts with his left hand, and, gathering them together, passes the knife on their side of the bone, so as to insulate it completely. Removing the restraint of his left hand, he now forms a second flap in the same way as he did the first.

"If there is only one bone, he immediately divides it, his assistant holding aside the flaps with his hands as high as it is exposed. If there are two, he separates the interosseous substance, and does the same thing; thus finishing his operation, which, with reasonable haste, and without the smallest hurry, need never occupy more than half a minute at most.

"It is impossible to imagine a greater contrast than that afforded by a comparison between the wound which results from this operation, and that caused by the method of circular incisions.

"The bone, instead of standing naked and conspicuous, can hardly be discovered until the flaps are laid aside. The muscles, not now deeply retracted, and exposing an abrupt ragged termination, extend far beyond the bone, and display two smooth equal surfaces, amply sufficient for coming into mutual contact, and well disposed for reciprocal union. Lastly, the skin, so far from forming a loose and hanging border about the wound, is left in undisturbed connexion with the subjacent parts, and in proportion just sufficient for supporting and covering them when the two flaps are brought together.

"The difference of appearance is not less remarkable after the wounds have been dressed.

"In the one case the line of union is straight, in the other it represents the arc of a circle;—in the first there is puckering of the integuments, in the second there is none;—in the former the muscles form projecting and inconvenient corners, in the latter they exist only when they are most required, i. e. over the bone."

In speaking of the two modifications of this operation by the circular incision, the one by M. Dupuytren, the other by Richter, Mr. Syme describes the former surgeon as cutting skin and muscles down to the bone at one sweep; and, after retracting the muscles to what he

considers a sufficient extent, *in which he is not very particular*, he divides the bone, which he occasionally dresses round with dry charpie, previously to *approximating* the edges of the stump, for it is impossible to bring them into contact. Surely this detail does not entitle Mr. S. to call M. Dupuytren the ablest surgeon of the age we live in, although we are perfectly convinced that his merits are of a very high rank, and place him (some few antiquated prejudices excepted) upon a level with the first surgeons of this or any other country.

We cannot do more than say, that Mr. Syme's plan of amputating appears very plausible, though, perhaps, not free from objections; and that, with regard to the flap operation below the knee, as recommended by Mr. HEY, we know no good reason why it is generally disused, since the success attending it has usually been very complete, and the stump is much more firm and sound than that procured by a circular incision.

Mr. Liston's paper does little more than advocate the flap operation, as above described.

A short Memoir on *amputation at the shoulder-joint*, by LISFRANC, has been presented to us. The method of operating therein described is not essentially different from that mentioned by Mr. AVERILL, and we should not have noticed it but for two reasons: in the first place, to express our disgust at the silly vanity which leads a man so eminent as M. Lisfranc to say that this operation is one of the triumphs of French surgery, which formerly had no *rival*, and, perhaps, has none still. Willing as we are to give as much praise to French surgery as we can, —and in many respects it deserves very high commendation,—yet to say that it has no *rival*, is a stretch of absurdity that we are quite sure M. Roux (who has visited this country) would not have been guilty of. Our other reason is practical. M. Lisfranc agrees with M. Larrey in filling the wound, after this operation, with dry charpie; and adds, that that gentleman thinks, and *with reason*, that union by the first intention should not, in these cases, be attempted. What M. Larrey's reasons are, we are at a loss to conceive; but we should have been happy to have heard them.

One more remark upon another amputation now beginning to be in fashion, and we shall take leave of this subject: that remark is extracted from Mr. C. BELL's late work, of which an extended review has already been presented to our readers. At page 37, when speaking of necrosis of the thigh-bone consequent upon amputation, in which, the front of the stump falling into bad suppuration, the matter found its way into the medullian of the bone, and necrosis followed.—" Even in such a case," says Mr. Bell, "if you found a bad stump and a projecting bone, and were to suppose that the whole bone was carious, and to conclude that, to amputate safely, you must take it off at the joint, you would commit one of those errors, for which it is a poor excuse to say that you knew no better." He pursues this subject in the following pages, which we seriously recommend to the perusal of the young surgeon, only lamenting that we have scarcely space for the following

additional remark:—"Here is a bone," continues our able author, "which has been fractured by a musket-shot: the bone, you see, has united, but necrosis has been the remote consequence. Amputation has here been properly performed, since suppuration was wasting the patient; but was there a necessity for operating at the hip-joint?—You see there is no necrosis at the head or neck, or near the trochanter; and, if he had amputated even at the very centre of the bone, he could have withdrawn the sequestrum, and with it all source of irritation from the stump." We have seen this circumstance occur, highly to the credit of the surgeon who amputated; and we make no doubt that, had this gentleman been seduced by the temptation of performing the hip-joint operation, that the death of the patient must have been the result.

M. LISFRANC has published an account of *a new application of the stethoscope to the detection of fractures*, and which he affirms renders them easily detectable, even under circumstances of great swelling, and with a very slight motion of the fractured parts. We shall insert the general rules which this gentleman lays down for the application of this instrument.

"1. When the stethoscope is applied upon a fracture, it is almost indifferent whether the mouth-piece be left in it or not; but in proportion as we recede from it, the crepitation becomes more sensible, if the instrument be deprived of the mouth-piece.

"The more superficial the bones are, the more the crepitation is distinct; and, as the slightest movements are sufficient to produce it, it is the most sensible upon the fracture. Thus we not only determine the fact of the fracture, but also its precise seat. It would be useless to remark how much we thus avoid those painful examinations, and how important it is in practice to know the precise situation of the solution of continuity in the bone. To discover this situation with accuracy, it is indispensable that the movements impressed upon the fragments should be always the same.

"3. The crepitation is less appreciable in proportion as we recede from the fractured point, but it is heard at almost inconceivable distances: in that case, however, it must be rather strong.

"4. When a fracture exists with crossing of the part *(chevauchement)*, the crepitation is less easy to be distinguished; but, if an unexercised ear do not perceive it very easily, it may be rendered much more distinct by practising slight extension and counter extension.

"5. The crepitation occasioned by fragments of compact bones produces an acute sound, with loud crackling *(des forts petillemens)*: perceived by the stethoscope, they are often loud, and sometimes considerably offend the ear.

"6. The crepitation of fragments of spongy bones is obtuse *(sourde)*, and is similar to the action of a file upon a hard and porous body (the pumice-stone for instance); the noise, from time to time, is intermixed with rather stronger sounds, which have a certain analogy with the crepitation of compact bones.

"7. The crepitation of oblique fractures is stronger than that of transverse fractures.

"8. If a liquid be effused round the fragments, there is joined to the crepitation a noise similar to that which the foot produces in a bad shoe containing water.

"9. When the fracture is complicated with splinters, there is heard, besides the ordinary crepitation, a sort of crackling, similar to that which many hard and angular bodies would produce when rubbed against each other.

"10. When the fracture is accompanied by wounds of the soft parts, to the crepitation are joined sounds similar to those produced by strong inspirations and expirations, when the mouth is widely open.

"11. Luxations cannot be confounded with fractures; for the sensation produced by the displaced articular surfaces is slight, and hardly extends beyond the situation of displacement: it is obtuse, like that of two polished and humid surfaces moved upon each other.

"12. The movement of tendons in their sheaths produces sounds, full, obtuse, jerking, rather thin *(rares)*, and extremely different from crepitation."*

We shall do no more upon this occasion than allude to Mr. LISTON's remarks on *caries of the bones*, because his paper is at present incomplete: our next Retrospect will, therefore, embrace the whole of that obscure subject.

On *spinal diseases* a great deal has been written during the last half-year, and the treatment of the lateral curvature appears now to be placed upon a much firmer and more philosophical basis than formerly. Mr. SHAW's work must justly be quoted as a very valuable addition to our stock of knowledge in this class of complaints; and we also mention, with much satisfaction, that Mr. BAMPFIELD has lately received the Fothergillian medal of the Medical Society for his Essay on Spinal Curvatures, the substance of which appeared in the pages of this Journal some months ago.

On the subject of *syphilis* we have not much novelty to record. Many pages of the Journal Complementaire have, for two or three months, been occupied by the opinions of M. SIMON on the treatment of this disease: he is a violent advocate for salivation, and full of the old prejudices relating to the disease itself.

Mr. BOYLE has lately published a small volume, the object of which is to recommend large doses of the submuriate of mercury for the cure of the primary symptoms of this disease. This practice is not different from that in vogue in the days of WISEMAN, and more lately of TURNER. For our own parts, we conceive the question as to the propriety of administering mercury in this or that particular case, to be of infinitely more importance than a choice of the form of preparation employed. This we have no doubt about, that, among the poor and the labouring classes in great towns, the profuse exhibition of mercury is more fraught with evil, than one unacquainted with the cases usually

* *Anderson's Quarterly Journal*, No. 2.

met with at the public charities of the metropolis could suppose. Of Mr. Boyle's work we do not wish to speak unfavourably; but we cannot help thinking that it exhibits but a slight acquaintance with the real merits of the mercurial plan of treatment, so freely tried in this country some years ago; and that the facts brought to light by that investigation have either escaped his notice, or not made a due impression upon his mind.

Dr. BALINGALL* has published some remarks on *the carious skull of a person who died of syphilis;* and, since he has never been able to find that mercury has produced carious bones, or other secondary symptoms, in those who have taken that remedy freely for the cure of liver-complaints or other diseases, he concludes that syphilis, and not mercury, is the cause of caries. Now, we think a different explanation might be given of this matter. In the first place, is it not possible that there may be some *relation* between the disease (syphilis) and the remedy that calls into action the inflammation and suppuration of the bone? Has Dr. Balingall carefully examined all those cases of supposed syphilitic caries, whether of the bones of the nose, tibia, or cranium, that come before him? and, if so, has he not *invariably* found that these sufferers have *all* taken mercury freely, under circumstances of exposure to weather, or evident derangement of health? Anxious as we are to establish the truth in this important question, and having made it our business to inquire closely into it, we have found hitherto strong reasons for believing that mercury, pushed too far, or injudiciously administered, either with regard to time or situation, has always been the exciting cause of affections of the bones themselves. For example, may not syphilis excite a scrofulous affection of the periosteum and bone? and will not mercury, administered freely, under the supposition of this affection being venereal, inevitably produce inflammation and caries of the bone itself?—in which case, though the original taint be venereal, the diseased condition of the bone must undoubtedly be ascribed to the rash and intemperate administration of this remedy.

We have also seen two or three well-marked cases of *eruption*, *sore throat*, and *pains of the limbs*, consecutive upon the liberal exhibition of this remedy in diseases of the liver; and one remarkable case, where a severe *ptyalism* recurred, without any apparent cause, after a cessation of more than three months.

Mr. MACILWAIN has published a small work upon the treatment of *strictures of the urethra*, which we strongly recommend as containing sound views, and highly valuable practical rules of conduct. We shall endeavour to make our readers better acquainted with the contents of this little work, in a subsequent Number of our Journal; but we can truly say that such a publication was much wanted, and that want is now very satisfactorily supplied.

We have looked over M. OLLIVIER's work on *diseases of the spinal*

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* *Edinburgh Medico-Chirurgical Transactions.*

marrow, but we do not find any surgical novelties to present to our readers.

A great number of valuable cases of *pressure produced by fracture and other injuries of the spine* are related; but, neither theoretically nor practically, is there any thing added to the present stock of our knowledge, or any improvement suggested as to their mode of treatment.

The *lateral operation for lithotomy* has lately found a very able advocate in Mr. KEY, whose Treatise is highly deserving of an attentive perusal. The object of Mr. Key's work is to recommend the substitution of a director, which is straight, with the exception of a slight curve near the extremity, and a knife, which is longer than a common scalpel, and slightly convex in the back near the point. The mode of performing the operation with these instruments he thus describes:—

"An assistant holding the director, with the handle somewhat inclined towards the operator, the external incision, of the usual extent, is made with the knife, until the groove is opened, and the point of the knife rests fairly in the director, which can be readily ascertained by the sensation communicated; the point being kept steadily against the groove, the operator with his left hand takes the handle of the director, and lowers it till he brings the handle to the elevation described in Plate III. keeping his right hand fixed; then, with an easy simultaneous movement of both hands, the groove of the director and the edge of the knife are to be turned obliquely towards the patient's left side. The knife, having the proper bearing, is now ready for the section of the prostate: at this time the operator should look to the exact line the director takes, in order to carry the knife safely and slowly along the groove; which may now be done without any risk of the point slipping out. The knife may then be either withdrawn along the director, or the parts further dilated, according to the circumstances I have adverted to. Having delivered his knife to the assistant, the operator takes the staff in his right hand, and passing the fore finger of his left along the director through the opening in the prostate, withdraws the director, and exchanging it for the forceps, passes the latter upon his finger into the cavity of the bladder.

"In extracting the calculus, should the aperture in the prostate prove too small, and a great degree of violence be required to make it pass through the opening, it is advisable always to dilate with the knife, rather than expose the patient to the inevitable danger consequent upon laceration."

We perfectly accord with Mr. Key in his objections to the gorget; and his observations upon the disadvantages of the staff are very strong, and it certainly requires much practice and considerable *tact* to manage it: yet the success, both of Mr. MARTINEAU and Mr. DALRYMPLE at Norwich, are as great as can reasonably be expected under any mode of operating that can be suggested. We know not why the *lithotome caché* has been so entirely banished from practice in this country. We have seen it frequently employed on the continent with the greatest success. Upon the whole, we are induced to think that the lateral

operation performed with the knife and staff, or with the director, as recommended by Mr. Key, comes as nearly to perfection as possible.

One more point, we conceive, this gentleman has explained very properly,—that is, the cause of death after this operation; which, he says, arises generally from suppuration of the reticular texture surrounding the bladder. This serious disease, so often consequent upon wounds and punctures, is frequently overlooked, and has never been explained and illustrated in the manner it deserves.

We have now gone through our catalogue of the most important new publications, and nothing remains for us to notice but the new instruments and machines, which have been lately added to our surgical armoury. This is, however, the most difficult part of our task; since, to describe mechanical contrivances without the aid of engravings, is by no means easy.

Mr. ELDERTON has described, in the Edinburgh Journal, *a new fracture box*, intended to afford permanent and complete quietude in the treatment of compound fractures. This box is constructed to admit either of the horizontal posture, or of any degree of inclination that may be preferred; in which, however, it does not differ from other contrivances of the same kind. Its peculiar feature is, that, on the upper side of the *floor*, as it may be called, twenty transverse grooves are cut, an inch apart from each other, and half an inch deep, for the purpose of receiving a corresponding number of dove-tailed wooden slides. Each slide, which is five inches long, has a hole bored on its upper edge, half an inch in diameter and one inch deep, for the purpose of receiving the rounded tenon of the several perpendicular wooden pins, each five inches long. At the bottom of each transverse groove are bored small holes, a quarter of an inch apart, to receive iron pins and to support the slides; and which, as well as the wooden pegs above mentioned, are driven more or less inwards, to suit the different diameters of the fractured leg. There are also some peculiarities of contrivance respecting the foot-board, which, for want of the engraving, we cannot enter into. The advantage of the above contrivance consists in the surgeon being enabled to dress the wound, or to examine any part of the limb, without subjecting it to motion.

We have two contrivances presented to our notice, for the purpose of *tying deep-seated arteries*. We conceive that Mr. WEISS's aneurismal needle supersedes the necessity, almost, of recording any invention for that purpose; but it is our duty to mention every thing that comes before us, having a claim to novelty. One of these instruments is invented by Professor JACOBSON, of Copenhagen; the other by M. PREVOST, of Geneva: they are both too complex for mere description, and we can do no more than refer to the plate.*

We have already mentioned† Mr. WEISS's *new dilator for the anus or vagina*, upon which occasion we remarked the close resemblance which it bears to an instrument destined for the same purpose, described

* *Edinburgh Medical and Surgical Journal*, April 1824.

† *London Medical and Physical Journal*, May.

by AMBROSE PARÉ. We say this without meaning to detract from Mr. Weiss's merit, since we have no doubt that, as far as he is concerned, the invention is entirely his own; and we cannot too much praise the liberality which that gentleman has shown in putting his invention so unreservedly before the profession.

As the imperfections of any production are in some degree measured by its pretensions, we request our readers to observe, that, in the foregoing Paper, we do not profess to have given a complete history of the Medical Sciences during the last six months; but merely a compilation of the most important facts which have come to our knowledge within this period, *and which we have not previously had an opportunity of mentioning*. We adopt this plan to avoid unnecessary recapitulation; and, on this account, we decline noticing either the valuable original communications published in the preceding volume, or any of the works which we have already reviewed.

APPENDIX.

An ACCOUNT *of the* OPINIONS *recently advanced by* M. MAGENDIE, *with regard to the* FUNCTIONS *of certain* NERVES.

THE recent visit of M. MAGENDIE to London, and the public performance of his experiments on the fifth pair of nerves, have given to them a greater degree of interest than it is probable they would otherwise have excited, ingenious, and in some respects satisfactory, as they unquestionably are. On this account, we have hastened to lay the papers containing his new views upon this subject before our readers, and shall submit a few observations which their perusal, and witnessing a repetition of the experiments in question, have suggested: and if, in doing this, it shall appear that we differ from the author with regard to his conclusions, at the same time we are happy to bear testimony to the neat and skilful manner in which the experiments were performed, as well as to the solicitude with which he strove to render them intelligible and satisfactory to the gentlemen present. In the first place, we shall let M. Magendie speak for himself, giving his papers without any other alteration than this, that we have numbered the sections for the sake of referring to them more easily; and that we have placed in italics the most important, and (as it appears to us) most erroneous, of his conclusions.

"*Is the Olfactory Nerve the Organ of Smell?—Experiments on this question, by* M. MAGENDIE.

To ask if the olfactory be the nerve of smell, is it not to raise a laugh at the expence of the querist? Who doubts it? will be the answer. Has it not been an acknowledged truth, ever since anatomy made us acquainted with the disposition of the nerve,—its distribution on the olfactory surfaces,—its complete development in those animals which have the sense most perfect, &c. &c? I confess that, if the question

had been put to me but last month, I should not have hesitated to answer it in the affirmative, nor should I have ventured to suggest a doubt upon the subject; notwithstanding that, in physiology, medicine, &c. it may not be without use to doubt somewhat, things which are the most certain: but let who wills, lay doubts aside.* Be this as it may: being desirous this season of demonstrating the different properties of the nervous system, I began with endeavouring to prove, by direct experiment, that the olfactory nerves bestow the sense of smell; an attempt which, so far as I know, had never hitherto been made.

1. My first experiment was to lay bare the olfactory nerves in a dog, about a year old. I scarcely expected to find them sensible to the contact of foreign bodies, or even to pricking, the hemispheres of the brain being insensible to such means of irritation throughout the greater part of their mass; and accordingly pressure, pricking them deeply, and tearing them in various ways, produced no effect which indicated sensibility of these nerves. I was curious to see whether the direct contact of a very odoriferous body would afford the same result:—I therefore poured some drops of ammonia upon the nerve; at first the animal seemed not to perceive it, but soon showed proofs of lively sensation. I immediately discovered that the liquid had flowed over the sides of the nerve, had reached its lower surface, and consequently was lodged in the pit of the ethmoid bone. I then was of opinion that the ammonia had acted on the medullary part of the nerve, which we know is expanded upon the cribriform plate, and that at least the white inferior surface of the nerve possessed sensibility, if the cineritious substance of the upper surface did not.

2. After these observations, I entirely destroyed the olfactory nerves, persuaded that I should then abolish completely the sense of smell. What was my surprise, on examining the animal the following morning, to find that he was yet sensible to powerful odours which I presented to him (such as ammonia, acetic acid, and the essential oil of lavender, &c.) The sensibility of the internal cavity of the nose had lost nothing of its energy: when a probe was introduced, the effects were exactly similar to those in a dog which had not been touched. This extraordinary phenomenon recalled to my memory a fact which I had passed over without much attention last year, because it stood so much opposed to received opinions, that I attributed the occurrence, I know not why, to some fault in the performance of my experiment. I allude to a duck, which survived for eight days after I had removed the hemispheres of the brain, presenting many curious phenomena. Among other singular circumstances, it still retained the power of perceiving strong odours. I exhibited this animal, and subjected it to various proofs of this, in the course I was giving at the time.

To be better satisfied of the fact, I destroyed the olfactory nerves in many other animals, and the results were exactly similar; but I made the important remark, besides, that the sensibility, which I had before observed at the inferior surface of the olfactory nerve, extended only along the outer border of the cribriform plate; and from this I was led to conjecture, that the sensibility might belong not to the nerve of smell, but to the branch of the ophthalmic which passes from the orbit into the nose through a fissure in the cribriform plate.

3. From this suggestion I was led to suspect, further, that the branches of the fifth pair, which are distributed among the cavities of the nose, are the organs by which the sense of smell is maintained after the destruction

* "Bien qu'en Physiologie en Medicine, &c. il ne soit pas inutile de douter quelque peu des choses les plus certaines: mais ne doute pas qui veut."

of the first pair of nerves. These branches in man are pretty numerous, though not very large; they consist, 1st, of the ethmoidal branch of the nasal: 2dly, the naso-palatin branch described by Scarpa: 3dly, of numerous branches which arise from the internal surface of the spheno-palatine ganglion. These nerves coincide in so far that they are all distributed upon the pituitary membrane.

I was not aware of the exact manner in which the fifth pair gives its branches to the nose of the dog, and I requested M. Desmoulins, who is well skilled in these researches, to dissect this nerve in the dog along with me. We discovered that the ethmoid branch is much larger than in man, and that it supplies a considerable number of small branches to the uppermost part of the nasal cavity; we found besides that there is no spheno-palatine ganglion on the superior maxillary division, but that it sends numerous branches of considerable size, which are distributed on the inferior, lateral, and internal parts of the nose.

4. It was then anatomically possible that the whole sensibility of the pituitary membrane might depend upon the divisions of the fifth pair. But conjectures concerning organic functions, derived from anatomy, are worth nothing until they are proved by physiological experiments. I therefore thought of cutting the fifth pair of nerves, in such a manner that the animals might survive. This was more easily said than done. The nerves, as they pass out of the base of the skull, are embraced by the cavernous sinus and the internal carotid artery. Nevertheless I made the attempt in several rabbits; and had the good fortune to succeed in cutting them on both sides, in a number of animals, without producing any very serious injury. I made the same attempt on puppies, kittens, and guinea-pigs, and, when the nerves were once well divided, I was able to assure myself that every trace of the action of powerful odours disappeared. The same animals, which, before the experiment, sneezed or rubbed their noses, or turned away their heads, when they were made to inhale ammonia or acetic acid, &c., continued perfectly undisturbed, when the fifth pair was divided, or only showed symptoms of the odour having affected the larynx. *The result of this experiment, in counterproof of the preceding, appears to me to shew, that the sense of smell, as far as regards powerful odours, depends upon the branches of the fifth pair: and that the first pair of nerves has no share with the fifth in bestowing this function.*

5. Here an objection presents itself. The odours employed, it may be said, are very active: they produce a chemical action upon the pituitary membrane just as when they come in contact with the conjunctiva. Is it not possible, when you destroy the sense of touch in the membrane of the nose, that you deprive it, not of the power of perceiving odours, properly so called, but rather of its sensibility to the impression of pungent and caustic vapours; such as those of ammonia and acetic acid? This remark may apply to these two vapours, but not to the oil of lavender or of dippel. At any rate, before the performance of these experiments, it could scarcely have been presumed, that irritating vapours did not act on the sense of smell.

6. For the purpose of doing away with this difficulty experimentally, I destroyed, by bruising them, (en les broyant) the olfactory nerves in a setter, the fineness of whose nose is well known; and I observed just as in my former experiments, that he could easily perceive powerful odours. But I was desirous of ascertaining whether he could distinguish the smell of meat, or cheese, or food in general. With this intention I enclosed portions of these in paper, and placed them before him; he invariably tore off the paper, and then devoured the contents. Yet I cannot regard this experiment as satisfactory, because the dog, in other circumstances, did not appear able to detect, by its smell, food placed near him without his

knowledge. Supposing this last result to be correct, it does not prove, however, that the fifth pair is not the agent of the sense of smell, because the injury which is necessary to destroy the olfactory nerves, necessarily produces inflammation within the cavity of the nose, quite sufficient to injure, in a secondary way, the power of smelling. This subject I am pursuing at present. In chickens, ducks, and magpies, I removed the lobes of the brain with the whole of the olfactory nerves. They continued to possess all the sensibility which belongs to the membrane of the nose, and manifested evident signs of the action of powerful odours on the sense of smell: I cannot comprehend how the contrary has been lately published.

7. To M. Ramon, medical inspector of the Maison Royale at Charenton, I am indebted for a fact which appears to me to prove, that the integrity of the hemispheres of the brain is not indispensable for the exercise of smelling. It is common to see patients, who have been afflicted for several years with madness, fall suddenly into a condition of dullness and torpidity analogous to complete drunkenness; their limbs totter, their motions are not under their control, and their speech is disturbed; this state, which is beyond the power of relief, is followed by an entire loss of the intellectual faculties, and not long afterwards by death. On examination, the hemispheres are found gorged with blood, the membranes inflamed, and the cortical substance deeply altered. M. Ramon has observed in such individuals that the sense of smell continued, not only with regard to powerful and pungent odours, but also to such as are much more transitory.

Such are the observations concerning the nerve of smell which I present to physiologists: they are as yet incomplete, and require to be followed up. I hope, however, that they may induce others to repeat them, and not to neglect an opportunity of confirming or invalidating them, by pathological observations.

8. From these researches it likewise follows, that animals, such as the dolphin, in which there are no olfactory nerves, are probably not deprived of the sense of smell, notwithstanding what has been asserted by naturalists. If it be confirmed that the faculty of smelling belongs to the fifth pair, we have still to enquire what can be the use of the olfactory nerves and their lobes. Nothing hitherto is known which is likely to point out the way to us, in which case they would require to be added to the list of those parts of the nervous system concerning the functions of which we are still entirely ignorant."

" *On the Influence of the Fifth Pair of Nerves on the Nutrition and Functions of the Eye.* By M. Magendie.

It has been seen, in the preceding Memoir, how I was led to cut the fifth pair of nerves within the cranium, in such a manner as not to destroy the life of the animal. I have thus been led to observe phenomena completely at variance with our received ideas respecting the functions of the nervous system.

After having cut the fifth pair of one side in a rabbit, I perceived that all sensibility was lost on the same side of the face; the inside of the nose, the surface of the conjunctiva, &c. being insensible to the contact of hard bodies, and even of sharp instruments. I wished to ascertain if the loss of sensibility also obtained with regard to very irritating chemical agents. For this purpose I applied ammonia to the eye; and I had no difficulty in discovering that it produced no impression. In order to have a test with which to compare it, I touched slightly the eye of the sound side with a little ammonia; and the animal immedi-

ately manifested (by its movements, its efforts, the abundance of tears, and closing the eyelids, &c.) the exquisite sensibility which is known to belong to the eye. There was nothing similar in the side where the nerve was divided: the eye was dry, and, what is extraordinary, the movement of the eyelids called winking had ceased; the ball of the eye itself appeared to have lost all motion; the iris was strongly contracted and immobile; in fine, the eye looked like an artificial one, placed behind eyelids which had no power of moving.

Much perplexed *(intrigué)* by the multitude of strange phenomena which I had observed, I delayed till next day the continuation of my researches, and I endeavoured to discover the rationale of what I had seen. The loss of sensibility of the surface of the eye, was the circumstance most easily understood; the distribution of the branches of the ophthalmic nerve to the eyelids, conjunctiva, &c. well explained this phenomenon; which, moreover, had been observed by Mr. Mayo on pigeons. The suspension of the secretion of tears might likewise be accounted for, by the paralysis of the lachrymal nerve; but the immobility of the eyelids, that of the eye, and the permanent contraction of the pupil, were not so easily reconciled with known facts. I contented myself with conjecturing that, in cutting the nervi trigemini, I had probably included the motores occulorum.

Next day I examined the animal, and was not a little surprised to find matters as I had left them: only the sound eye, in consequence of the application of the ammonia, was very violently inflamed; the other eye, on the contrary, presented no appearance of this kind. The section of the nerves had thus prevented the development of inflammatory action; and this result was not less curious than the preceding.

To enable me to study these various phenomena with care, I that day cut the fifth pair in a number of rabbits: in some, on one side; and in others, on both sides. It was by observing these animals during the following days, that I was led to discover the facts I am about to relate, and which will doubtless excite the interest of physiologists.

A. Twenty-four hours after the division, the cornea begins to become opaque, at the end of seventy-two hours it is much more so,—the opacity encreases, and five or six days after the operation it is as white as alabaster.

B. From the second day the conjunctiva becomes red, appears inflamed, and secretes a very abundant, milky, puriform matter: the eyelids are either wide open and motionless, or else they are sealed by the puriform matters which have dried between their edges, and when they are separated a considerable quantity of matter above described escapes.

C. Towards the second day after the section, the iris is likewise observed to become red, its vessels are developed, and, in fine, the organ inflames.—False membranes are formed on its anterior surface, which, like the iris itself, have the appearance of a disk pierced in the middle. These adventitious membranes at length fill the anterior chamber and contribute to the opacity of the cornea. Is it not a very extraordinary phenomena to witness an active inflammation with suppuration, and complete insensibility of the part inflamed, and which is caused by the division of a nerve? Before going farther, I would mention that this rapid opacity of the cornea at first appeared to me to depend upon the prolonged contact of the air. To ascertain this, I cut the seventh pair in a rabbit, which, according to Mr. Charles Bell, governs the movement of winking: but, although the

eye of this animal remained constantly exposed to the air for many days, no opacity of the cornea took place; nor any inflammation either of the conjunctiva or of the iris. I then suspected that the opacity depended on the want of the secretion of tears. It is possible, said I, that a membrane such as the cornea may have occasion to be constantly soaked by a limpid fluid to maintain its transparency. To ascertain if my conjecture had any foundation, I completely removed the lachrymal gland in two rabbits, but no opacity of the cornea was perceptible during eight days that they survived this extraction. My supposition therefore was without foundation. The opacity of the cornea, the inflammation, and the suppuration of the conjunctiva and of the iris, were thus found to depend upon nervous influence.

D. Towards the eighth day after the section of the fifth pair the iris becomes visibly altered; it detaches itself from the sclerotica, and its centre ulcerates: at the end of two or three days the humours of the eye, being muddy and partly opaque, make their escape, and the eye is reduced to a small tubercle, which only occupies a very small part of the orbits, giving something hideous to the aspect of these animals. If the eye be now dissected, it is found to contain nothing but a matter which resembles cheese newly coagulated, and that the retina has almost entirely disappeared; a trace of it here and there is all that can be seen.

E. Vision appears to be, if not entirely lost by the division of the nerve, at least very much weakened, and if, some hours after the operation, a sharp instrument be pushed against the surface of the retina, the animal gives no mark of sensibility;—when both nerves are cut in an animal, he appears blind, and his gait is very singular: he only moves with the chin strongly pressed against the ground, pushing his head before him, and using it as a guide in the same way as a blind man does his staff. The conduct of an animal in this state differs entirely from that of one simply deprived of sight, the latter easily directing itself by means of the moustaches and of the sensibility of the skin of the face: he stops before holes, perceives obstacles,—in short, it would often be difficult to know whether he was blind or not. Whilst the animal in whom the fifth pair has been divided has only one way of moving, and instead of avoiding obstacles, often persists in pushing against them for many hours so as to excoriate the skin on the fore part of the head.

F. The tongue is insensible on the side where the nerve is cut, and on either side if both nerves be divided. The animal in this case holds it out of its mouth, but is able to draw it in towards the pharynx. Sapid bodies have no apparent action on the anterior part of the organ, but they have an evident effect upon its centre and root. In dogs and cats, the lower jaw drops, after the intersection of the fifth pair on both sides, which greatly impedes deglutition, and sometimes renders it impossible. They have the same gait as rabbits, but instead of resting on the chin, they often press against the tongue which gets underneath, in consequence of the dropping of the jaw, and is rubbed against the ground during progression.

G. When only one nerve is cut, changes take place in the nostrils, mouth, and surface, of the larynx of the same side: half of the tongue becomes white, the epidermis becomes thickened, the gums separate from the teeth, and food lodges in the intervals thus formed; probably the animals being no longer arrested by feeling these substances, push them between the teeth and gums without being sensible of it.

H. Observation has led me to believe, *that the division of the fifth pair likewise entails the loss of hearing:* this would be less extraordinary, as in many animals the nerve of hearing is evidently only a branch of the trifacial.

If this last result be correct, all the senses would thus be under the influence of the fifth pair, and the general theory of sensations would require to be reformed."

What are these experiments of M. Magendie's intended to prove?

Their object, or rather the general inference from them, is simply this —that the olfactory nerve does not communicate the sense of smell, nor the optic nerve of sight, nor the auditory of hearing: but that the fifth pair communicates the senses of smell, and vision, and hearing, as well as of common feeling, or touch.

The proofs of this position are as follows:—With regard to smell, we find (section 1st,) that the olfactory nerves were laid bare, and a strong odoriferous caustic substance was applied to them without the animal manifesting any sensation: by which, as it appears to us, the simple fact of their insensibility to pain (a property common to all the anterior part of the brain) was proved, and nothing more.

We are next informed (section 2d,) that the olfactory nerve was entirely destroyed, the animal still retaining the sensibility to powerful odours, and having the same sensibility to the introduction of foreign bodies into the nostrils, as before the operation. This latter fact, having nothing whatever to do with the point in question, we shall not at present remark upon it. Let us observe the proofs that the animal retained the sense of smell. When liquid ammonia is held to the noses of rabbits, guinea pigs, or the other animals generally operated upon in these experiments, they turn away from it, and sometimes, particularly if any of it has touched the nose, rub their faces with the paws. They do so in those which have the olfactory nerve destroyed, as well as in those which have not. But does this prove that the irritation which they thus strive to remove is produced by the *smell* of the substances employed? To us there is no proof whatever that it does not proceed from the irritating nature of these bodies, — viz. liquid ammonia, strong acetic acid, and volatile oils, acting upon that kind of sensibility which the nostrils possess in common with other parts of the air-passages. If the same substances be held before the eye, they give rise to similar irritation; so likewise when inhaled into the larynx (section 4). Yet it is absurd to suppose that the *odour* of a body can affect either of these parts, although they are irritated by the causticity of these volatile substances.

The only fair experiment would be, to take bodies which have strong smell without being volatile or caustic; and such we may suppose their food to be to different animals. Accordingly, this was done by M. Magendie (section 6). Pieces of cheese and meat were rolled up in paper, and placed beside a dog, who tore off the paper, and devoured the contents. But observe, it is expressly stated that, when these were placed beside him in such a situation that he could not see them, they remained undiscovered. Nothing can more clearly show that he detected them by the sense of sight, and not by smell. It is very remarkable that these objections should be stated by M. Magendie himself (sections 5 and 6), apparently without his seeing their force.

The next proof offered is the converse of the preceding. The fifth pair was cut (section 4th); "and every trace of the action of powerful odours disappeared." That is to say, animals which before had turned away from ammonia, &c. did so no longer. If our reasoning on the preceding facts be correct, it will, *mutatis mutandis*, equally apply to these. The common sensibility being destroyed by the operation, the volatile particles of the ammonia, &c. coming in contact with the pituitary membrane, no longer excited any painful sensation; but we know of no means by which it could possibly be ascertained that the animals did not smell the substances, seeing that the sense of smell is not accompanied by any external manifestations. The eye, as well as the nose, was thus rendered insensible; but it is to be remarked, that the larynx remained sound, and was affected as before (section 4th). Is not this a strong proof that the mucous membrane of all these parts is equally irritated by the contact of acrid bodies, through the medium of their common sensibility?

The circumstances mentioned at section 7th, on the authority of M. RAMON, is altogether so loose and unsatisfactory, that we are surprised to find M. Magendie attaching any importance to them. We beg to state the following case, which is directly opposed to the observations of M. Ramon.—A patient applied some years ago at the Westminster General Dispensary, for complaints unconnected with the subject of this paper; but the circumstance in point is, that he bore the marks of a wound received by a musket-bullet, which had entered the os frontis on the median line, a little anterior to the coronal suture, and came out through the back part of the roof of the mouth.* The ball must necessarily have destroyed the first pair of nerves, in passing through the cribriform plate of the ethmoid bone; and, although there was no sinking of the nose, nor any visible destruction of that organ, so that abundant branches of the nasal division of the fifth pair must have remained, yet the sense of smell was entirely gone.—Here, then, was M. Magendie's experiment of destroying the olfactory nerves, performed on an animal having this superiority over those operated upon by him, that, being gifted with intellect, he was capable of giving the requisite information regarding a sense, viz. that of smell, which is not evinced by

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* On writing to ask Mr. HUTCHISON if he remembered this patient, he returned the following answer:

"*Spring-Gardens; June* 25.

"Dear Sir,—I have received your note respecting the case of the man who was a patient of mine, at the Westminster General Dispensary, about six years ago, who had been wounded in the head by a musket-ball. I perfectly recollect the case, and have notes of it somewhere. But it may possibly serve your purpose for the present, if I state that the ball entered the cranium about the middle of the os frontis, appeared to me to have passed through the cribriform plate of the ethmoid bone, and escaped, or rather was cut out, from the posterior part of the palate. I perfectly recollect, also, that the man was subject to epileptic fits; *had lost the sense of smell*; that the wound was received at the Cape of Good Hope, near ten years previously to his consulting me; and, so struck was I with the case altogether, from its singularity, that I exhibited the man to the members of the Medical and Chirurgical Society, at one of their meetings.

Yours, truly,

To Dr. Macleod. A. C. HUTCHISON."

external manifestations; and this appears to us, under these circumstances, to be the only satisfactory means of judging.

Analogous to this case is the common observation, that caries affecting the upper part of the ethmoid bone destroys the sense of smell, though the patient continues to sneeze, and even to enjoy a pinch of snuff. Indeed, we have remarked, throughout this paper, that a due distinction is not made between the act or power of sneezing, and the sense of smelling. Sneezing is nothing more than a natural effort to throw off some irritating cause from the delicate membrane of the nose, just as coughing is to clear the throat. Now, if we destroy this sensibility by cutting the fifth pair, then we cannot by any means excite sneezing; a fact, of which none of our readers can be ignorant, who have perused the papers of Mr. BELL and Mr. SHAW. So entirely dependent is this act of sneezing upon the irritation of the fifth nerve, and so independent of the olfactory, that it is readily excited by tickling the nostrils with a feather, which is destitute of smell; while, on the other hand, the most powerful odours, whether pleasant or unpleasant, have no tendency to produce sneezing. Another fact tending to show that sneezing is independent of the olfactory nerve, is that it is sometimes excited by stimuli which do not act upon the nose at all. Thus, the writer of these remarks, by looking at the sun when it shines brightly, is made to sneeze as surely and as briskly as by taking snuff. And lastly, in common catarrh, the internal membrane of the nostril is frequently in such a high degree of excitement, as to be irritated by stimuli to which it is, under other circumstances, insensible. Thus, the mere exposure to the air will cause sneezing, while at the same time the sense of smell is almost lost. The only additional observation we have to make on this subject is, that we have numerous well-authenticated cases in which ossification of the falx, so as to press upon the olfactory nerves, has given rise to the most distressing sensations of smell.

Our remarks on the second paper will be extremely short, because our reasoning on the preceding, if good for any thing, in a great measure applies to both. The same operation on the fifth pair which renders the nostrils insensible to stimuli, likewise destroys the sense of touch of the other external parts, and, among the rest, of the eye; so that, when the cornea is rubbed, or even pricked, the animal manifests no symptom of pain. That this, however, has nothing to do with vision is proved, as well by the observations of Messrs. Bell and Shaw, as by the case related by Mr. CRAMPTON, of Dublin.* It is that of a young woman, who had so entirely lost the sense of touch all over the eyeball and neighbouring parts, as to suffer them to be handled without pain, or indeed any sensation; yet she saw distinctly with this eye.

The most important, and indeed the only, circumstance, in this paper, which renders the opinion that vision depends on the fifth pair plausible, is the contraction of the iris and its remaining insensible to light. When the experiment succeeds, this is always the case; and the pupil, indeed, is diminished almost to a point.

In addition to the circumstances mentioned by M. Magendie in his

* *Philosophical Transactions*, 1823.

paper, the following experiment was tried, at the suggestion of Dr. WOLLASTON :—A lighted candle was held before the eye, on the side where the nerve had been divided, with a view of ascertaining whether it would sympathetically produce any effect upon the sound eye. None resulted; and this was held to be an additional proof that vision was destroyed. The experiment, however, appears to us unsatisfactory, because, as we have already mentioned, the iris was so much contracted as to form almost a complete curtain between the retina and the light; and further, because, on applying the candle to the sound eye with the pupil of the natural size, some gentlemen thought the iris did contract, and some that it did not. We ourselves tried this experiment along with Dr. ELLIOTSON, and neither of us could perceive any contraction. In short, it was a matter of question whether, on applying a light before the eye of the sound side, the pupil contracted or not; which shows, at all events, that the degree of contraction, if any, was extremely small. Now, if the rays of light, having thus a free entrance through a natural and large pupil, produced so slight an influence upon the iris, what inference can we draw from the fact, that, when held before the other eye, in which the passage of the rays of light was almost entirely interrupted by the contracted iris, no sympathetic effect was produced in the other eye? Surely none at all decisive. This part of the argument proceeds upon the assumption that the iris and retina are mutually dependent upon each other, and that the movements of the former are an exact index of vision; but this is by no means universally the case. Some individuals are able to increase and diminish the pupil by a voluntary effort;* while, in some amorautic eyes, the iris contracts on the application of light, although the blindness be complete.

That vision is much impaired by this operation, we by no means deny: the appearance of the parts, as well as the gait of the animal (described in section E,) sufficiently show that it is so. But at the same time we would remark, that the eye is a very complicated piece of apparatus, which requires it to be in a perfect state in order to exercise its function; and a very curious fact, ascertained, among others, by M. Magendie himself, and mentioned in a preceding part of this Number, is that when, by any accident (as rendering the cornea opaque), this organ is brought into disuse, and its function no longer exercised, the optic nerve wastes. How can he account for this fact, if the optic be not the nerve of vision? Again, we protest against the accuracy of the experiment itself. That the fifth pair may be divided, is very possible; but that no other injury is done, seems not so easily proved. A sharp cutting instrument is thrust into the cranium, through the middle lobe of the brain, almost to the very centre of the base of the skull. The fifth pair lies so close by the cavernous sinus, that even Magendie, whose dexterity is unquestionable, cut it in the greater number of instances, so that the animals speedily died from effusion of blood. But besides this, the third, and more especially the fourth nerve, are here closely involved with the fifth; and, even if they be not actually divided, it is almost impossible but that they must be more or less injured

* This phenomenon occurs in the person of a distinguished member of the Medico-Chirurgical Society, and is particularly mentioned by Mr. SHAW in one of his papers.

and subjected to pressure, from the effusion of a portion of the blood, which must take place under the most favourable circumstances. Who, considering this, and having examined the anatomy of the parts in the rabbit and guinea-pig, will venture to argue from these experiments, as if it were certain that the fifth pair alone were merely and simply divided? "Il ne soit pas inutile," says M. Magendie, "de doubter quelque peu de choses les plus certaines."*

The circumstances with regard to the inflammation, and ultimate destruction, of the eye, are curious, and occurred exactly as described by M. Magendie, in the only rabbit which survived the operation: it lived a week. A phenomenon in strict analogy is presented by the hoof of the horse, which frequently becomes similarly affected from the division of the nerve.

The readers of this Journal must be aware that certain experiments have been performed on the nerves, and certain doctrines advanced concerning the nervous system in general, by Mr. CHARLES BELL and by Mr. SHAW. Now, as there are some points of resemblance, and some of difference, between their doctrines and those of M. MAGENDIE, it may not be irrelevant to point them out. Messrs. Bell and Shaw have cut the branches of the fifth pair after their exit from the cranium, and assert, as the result of numerous experiments, and lay it down as the basis of their doctrine, that this nerve communicates common sensibility, or the sense of touch, to all the parts whereon its branches are distributed. M. Magendie (who really writes and speaks as if he had not read the papers containing these researches,) cuts the fifth pair within the skull, and, like the gentlemen above mentioned, finds the parts supplied by its ramifications deprived of sensibility. So far he agrees with Mr. Bell and Mr. Shaw; but, while they rest at this conclusion, he goes further, and argues that smell and sight, and hearing likewise, depend upon the same nerve. With respect to hearing, we have no argument nor experiment brought forward in support of this opinion; and, therefore, we know not on what grounds it may be founded. With respect to the two former, we have endeavoured to show, that, however satisfactory his experiments may be, so far as they go, yet they are not such as to warrant the conclusions he has drawn from them.

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* We understand, from Dr. J. SOMERVILLE, that several of the rabbits were afterwards examined by Mr. H. MAYO, who did not find any other nerve divided besides the fifth. Notwithstanding this, however, we submit, that the objections urged above are valid.

Besides the experiments above mentioned, M. MAGENDIE divided the fifth nerve as it passed along the fourth ventricle, in order to show its connexion with the medulla oblongata. The results were similar, but not so well marked, as when the division was performed higher up. Wherever the nerve was cut, its division was attended with very acute suffering, as evinced by the expressive cries of the animal. The uses of the posterior and anterior roots of the spinal nerves were very satisfactorily demonstrated on a young dog,—the division of the one set depriving the limb of motion, and that of the other of sensation. M. Magendie likewise performed the experiments, alluded to in the Historical Retrospect, of removing different portions of the brain; and with the effects there mentioned.—In case any of our readers should think of repeating these experiments, we have to warn them that their performance is attended with considerable difficulty; particularly the division of the fifth pair within the head, which frequently failed, even in Magendie's hands, from hemorrhage.

OBITUARY.

On Wednesday, the 9th of June, at his house in South Audley-street, Thomas Chevalier, Esq. F.R.S. &c. &c. Surgeon Extraordinary to the King, and Professor of Anatomy and Surgery to the Royal College of Surgeons, London. Although Mr. Chevalier had for upwards of two years been suffering from severe and repeated attacks of indisposition, his death was unexpected and sudden; having been engaged in the active exercise of his profession the day previous to his dissolution. As a zealous and skilful practitioner, Mr. Chevalier was universally esteemed, and respected by his professional brethren. His general and professional reading was extensive; his ardour in the pursuit of knowledge, great; and the high character which he had attained was the deserved reward of a life devoted to the cultivation of science. Mr. C. was among the first, if not the very first, of those who obtained the Jacksonian Prize of the College of Surgeons. His Hunterian Oration may be mentioned as almost the only one of those compositions that has been read at all, or read with pleasure and advantage. He was likewise the author of a little treatise on Gun-shot Wounds, published at an early period of his professional career, and of many papers on various chirurgical subjects, interspersed in the periodical publications or in the Transactions of various learned Societies. If the Lectures delivered by Mr. C. at the College of Surgeons, and the volume lately published by him, fell somewhat short of the expectations that were formed by the profession, it must be recollected that those very expectations evinced the sense generally entertained of the merits of this gentleman, and that they were composed under the pressure of extreme ill health.

In private life, Mr. Chevalier's character stands in no need of any eulogium from us: he was generally respected, and will long live in the memory of his numerous friends. We understand that extravasation of blood in the brain was the sole and immediate cause of his death; though we have reason to believe that he had long entertained an opinion that there was disease, either of the great vessels or of the heart itself.

Monument to Dr. Baillie.—We understand that a meeting of the subscribers for the intended monument to the memory of this distinguished physician, is to be held at the Freemason's Tavern, on the 1st of July. We regret exceedingly that our limits will not permit us to do more than express our sincere wish that the object may succeed in a manner deserving alike of the late eminent individual and of the profession, to which he was so long an ornament.

METEOROLOGICAL JOURNAL,

From May 20, to June 19, 1824.

By Messrs. WILLIAM HARRIS and Co. 50, Holborn, London.

	MOON.	Rain gauge	THERM. 9 A.M.	THERM. MAX.	THERM. MIN.	BAROM. 9 A.M.	BAROM. 10 P.M.	DE LUC'S HYG. 9 A.M.	DE LUC'S HYG. 10 P.M.	WIND. 9 A.M.	WIND. 10 P.M.	ATMOSPHERIC VARIATIONS. 9 A.M.	2 P.M.	10 P.M.
May														
20		265	53	57	37	29.54	29.60	60	63	NW	NNW	Fine	Fine	Fine
21	☾		50	54	42	29.73	29.77	57	60	ENE	SE			
22			45	62	44	29.80	29.75	67	67	NE	SE	Cloud.	Sho'ry	Fair
23			50	54	48	29.76	29.75	65	70	N	NW		Fine	Fine
24		.18	50	54	41	29.76	29.84	78	78	NW	E	Rain	Rain	Rain
25			49	54	42	30.00	30.07	75	77	ENE	N	Fair	Fair	Cloud.
26			50	60	50	30.22	30.32	77	74	NE	SSW		Fine	Fair
27			60	66	55	30.40	30.42	60	60	W	E	Fine		Fine
28	●		64	65	52	30.37	30.24	58	60	S	S			
29			60	63	53	30.14	29.93	55	57	ESE	E	Fair	Overc.	Fa
30		.5	54	64	54	29.70	29.66	60	67	ESE	WSW		Sho'ry	Fine
31			56	65	54	29.70	29.80	64	70	W	NW	Cloud.	Fair	Fair
Jun.														
1		288	56	65	49	29.97	30.10	70	72	N	NE		Fine	Fine
2			55	67	48	30.17	30.12	63	69	NE	E	Fine		
3			50	59	48	30.18	30.15	70	70	ENE	NE	Cloud.	Cloud.	Cloud.
4	☽		49	64	45	30.18	30.10	72	70	ENE	ENE		Fine	Fine
5			53	60	50	30.07	30.00	70	70	NE	NE		Overc.	Overc.
6			55	65	55	30.03	30.00	70	72	NE	E		Fine	Fine
7			57	68	50	30.00	29.95	65	70	E	NE	Fine		
8			60	70	48	29.96	29.90	72	75	E	E			
9			52	67	40	29.86	29.74	79	80	E	E	Cloud.		
10		.60	50	55	45	29.75	29.84	95	84	NE	NE	Rain	Rain	Rain
11	○		49	57	44	29.94	30.00	75	79	ENE	NE	Cloud.	Fair	Fair
12			49	63	46	30.00	30.00	80	80	NE	NE			
13			53	60	49	29.85	29.70	81	89	SW	SW	Fair	Fair	Rain
14		.70	50	62	52	29.37	29.22	95	90	SSW	S	Rain	Fair	Fine
15			55	57	48	29.10	29.27	95	88	SE	S			Cloud.
16			55	60	47	29.40	29.46	73	80	ESE	NNE	Fine	Overc.	Cloud.
17			53	59	49	29.60	29.80	85	78	NE	NE	Rain	Fair	Fine
18			55	60	47	29.87	29.84	60	63	NE	W	Fine	Fine	
19	☾	.25	53	58	50	29.60	29.32	70	84	S	SSW	Rain	Rain	Rain

The quantity of rain fallen in the month of May, was 2 inches and 88.100ths.

NOTICE TO CORRESPONDENTS.

In our anxiety to render the Historical Retrospect *as complete as possible, we have encroached so much upon our limits, as to be obliged to add two additional Half-sheets, and to print the whole in a smaller type than usual. We have likewise judged it expedient to give an account of* M. MAGENDIE'S *Experiments, while the interest occasioned by their performance in London remains fresh: we have thus been obliged to omit all the other Departments, but the usual Arrangement will be resumed next Month.*

Numerous Papers have been received, which shall appear in the ensuing Number.—The List of Books *is unavoidably postponed.*

THE LONDON

Medical and Physical Journal.

No 2 OF VOL. LII.] AUGUST, 1824. [No 306.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,

SELECT OBSERVATIONS, &c.

ART. I.—*Remarks on* M. MAGENDIE'S *late Experiments upon the Nerves.* By JOHN SHAW, Esq. &c. &c.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,—I feel it due to myself, but more especially to Mr. Bell, to make a few remarks on the questions discussed in the "Appendix" to your Journal of last month.

I shall be obliged to state facts which may seem to bear upon the candour of a gentleman whom I should wish to respect; but, when the merit of such extraordinary discoveries as those which have lately been made on the nervous system is in danger of being frittered away, the truth, however it may operate, must be stated.

The name of M. Magendie is now so well known in this country, that it was not surprising that his late visit to London raised some expectations. There was much interest excited by the performance of the experiments which you have noticed; but, although M. Magendie has been engaged for many years in prosecuting physiology by experiments on living animals, it is extraordinary that the subject which he chose to exhibit in London, as the most interesting and as the most novel, was one which especially belongs to this country, and which had been already fully investigated.

Indeed, I feel myself bound to assert that the principal experiments by which M. Magendie attracted so much attention while in London, were suggested to him by me. I beg, however, to observe, that I had nothing to do with some of the deductions which he drew from them. But I shall go so far as to say, that the inquiry into the functions of the several nerves of the head had never engaged the attention of M. Magendie, until I pointed out to him the differences which there are between them; and especially the dissimilarity of the fifth from the other cerebral nerves.

With a conviction so strong as to induce me to venture on such assertions, I cannot repress my astonishment at the attempts made by M. Magendie's countrymen, and even by a few of our own, to give him credit for discoveries which I am still willing to believe he would not take to himself.

I shall now state the grounds on which I consider myself warranted in making the above assertions.

While in Paris, in the autumn of 1821, I was introduced to M. Magendie. Mr. Bell's discoveries on the nervous system naturally became the subject of conversation; and M. Magendie was so much interested by the facts which I stated, that he begged me to show him some of the experiments in proof of them. For this purpose we went out, between five and six in the morning, to the Veterinary College of Alfort, about five miles from Paris; and there, in presence of the Professor of Alfort, of Dr. Spurzheim, and a number of French gentlemen, I performed several experiments, (and among others that of dividing the fifth pair,) in example of the principles on which Mr. Bell had founded his opinions of the nervous system. At the same time, I presented to M. Magendie a short account of the system, (as it still stands,) and copies of the two plates which are given in the Medical Journal for December 1822 and June 1823. These plates, your readers may recollect, not only illustrate the difference between the two grand classes of nerves, but also show the similarity between the fifth and the spinal nerves.

In less than a month after this, the French Journals were full of Mr. Bell's discoveries, and, as I had expected, they were immediately taken up warmly in this country.

But the avidity with which every thing foreign is now received here, has made it necessary for me to come forward more than once to prevent the information, which came second-hand from Paris, being considered original.

This has been rather a difficult task; for, in consequence of several claims having been permitted to remain some time without being challenged, the assertions of the French in favour of their countryman have, even by some of our friends, been considered justly founded. I therefore hoped that M. Magendie's arrival in this country would be so far useful to the subject, as to excite attention to facts which have been hitherto little attended to, except by those who have been pupils in the school of Great Windmill-street: and it was exactly as I expected; for M. Magendie was invited to make his experiments, and the results were so striking, that the mass of a large assemblage of spectators were so much delighted as to shake hands with each other, and congratulate themselves on having witnessed these extraordinary and *novel* facts. However, a few,—although I

fear, from what I saw, (for I myself was present,) but a very few,—were as much astonished that it did not seem to be known that the experiments, which were exciting so much wonder, had been repeatedly done in the rooms on the other side of the street; and that, years ago, accounts of them had been published in all sorts of Journals, English and foreign.

I shall now ask, whether the slightest hint of the present views of the nervous system is to be found in any of M. Magendie's works, previously to the autumn of 1821,—that is, before I informed him of the discoveries for which many are still ready to give him credit. That I first pointed out to him the difference of the functions of the several nerves, does not rest on my assertion alone; for the first notice of the subject, to be found in his works, is in his Journal for October 1821, and is a quotation from the account which I gave him. I trust this will be sufficient to prove that, in the investigation of the functions of the several nerves, M. Magendie has not the merit of originality; and that the experiments which he has since made on this question are only following up Mr. Bell's inquiries.

Perhaps, it may still be said that M. Magendie has made some discoveries without having received any previous hints, as M. Cuvier ascribes to him the merit of having discovered the difference of the functions of the two roots of the spinal nerves.* But if, after the proofs which were offered in the Number of this Journal for October 1822, this idea still holds, I shall despair of being able to convince your readers to whom the merit of having discovered the functions of the fifth pair belongs. I ought, however, in justice to acknowledge, that I have no reason to suppose that Mr. Bell's claims to being the discoverer of the difference in the functions of the roots of the spinal nerves, is now disputed by any Englishman. Indeed, in all the works which have been lately published, it is fully admitted.

After reading the papers of M. Magendie, and the remarks which you have made upon them, one scarcely knows whether to be more surprised at the apparent attempt to give as a newly discovered fact, that the fifth pair is the nerve which bestows sensibility on the principal parts of the head, or at the singularly inconclusive reasoning and fallacy of the deductions from the experiments beyond what we already know. This is strong

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* See the *Rapport sur l'Etat de l'Histoire Naturelle et sur les Accroissements depuis le Retour de la Paix Maritime.* Par M. le Baron CUVIER.

M. Cuvier's remarks upon the progress of physiology in France appear curious, when compared with the observations which you have made at pages 10 and 15 of your Retrospect, on the contradictory statements of the results of similar experiments made by Flourens, Serres, Magendie, Rolando, Fodera, and Bailly.—"La rigueur des experiences auxquelles on l'a soumise, a imprimé a la science, qui en traite une caractere de precision, [it is of the experiments on the brain he speaks!] dont a peine il y a cinquante ans l'aurait on crue susceptible."

language; but surely it is excusable, and even necessary, when the attempt to overturn opinions which have been held for ages, and conclusions which have been drawn from a patient investigation of the anatomy of man and of the lower animals, and the results of experiments founded on these investigations, rests on no firmer basis than on experiments made at random, from which the author conceives, although he has not the slightest proof, that he has shown that the olfactory nerves are not for smell,—that the optic nerves are not for vision,—and that the auditories are not for hearing; but that all these fine and curious senses are supplied by a nerve, which at the same time gives the power of motion to the muscles of the jaws, and common sensibility to the surfaces of the head. It was really a bold conclusion to come to, that the results of such experiments were sufficient to prove the necessity of the general theory of sensations being reformed. "Si ce dernier resultat est exact tous les sens seraient donc sous l'influence de la cinquieme paire, et la theorie generale des sensations devrait donc etre reformée."

Although it is scarcely necessary, after the arguments which you have offered in contradiction of M. Magendie's views, to give any further illustrations to prove the complete error into which he has fallen, not only regarding the functions of the olfactory nerve and of the fifth, but even of the most common phenomena of breathing and smelling, I may remark that I might have stated, many years ago, that the portio dura is the nerve of smell, with as much reason as M. Magendie now believes the fifth to be so; for I could offer as strong proofs on the one side as the other. After cutting the right or left portio dura, the animal no longer smells by the same nostril, nor is it even irritated if ammonia be held under the nostril, although the fumes are so strong as to make his eye water. Indeed, even in cases where the portio dura of one side is paralysed, the patient no longer smells with the corresponding nostril. Has M. Magendie's experiments shown more than this, or even so much? By cutting the fifth pair, he rendered the surfaces of the nose insensible to the irritation of the caustic fumes; but have we any proof that the animal could not *smell?* I believe that, if we destroy the sensibility of the membrane, we shall very much impair the organ; but still these experiments afford no proof that the *sense of smell* is destroyed.

Indeed, no better example can be afforded of the justness of the remarks in your Historical Retrospect, on the manner in which experiments are now conducted in France, and of the mistakes into which we may be led by attaching importance to experiments which are made at random, and without a previous careful consideration of the structure and functions of each part. Had M. Magendie recollected that the nose was a

complicated organ, requiring several distinct nerves, he would have at once seen that its functions could not be properly performed, if any one of its parts were destroyed. Thus, if the portio dura be cut, the power of inhaling, in that particular manner which is necessary to smelling, is lost; and hence the sense is impaired.

With regard to the question of the influence of the fifth over the functions of the eye, I shall presently make a few observations; but, before doing so, I shall offer proofs, which I trust will be satisfactory to the most sceptical, that M. Magendie has not the slightest claim to the merit of having discovered any one of the functions of the fifth nerve.

I believe that the general impression among those who have interested themselves in this question is, that, with the exception of supposing the fifth to be the nerve of smell, sight, and hearing, (an idea, of which there is no desire to rob its author,) all the facts regarding the functions of the fifth had been previously described by Mr. Bell, or by myself.

In alluding to these papers on the sensibility of the parts about the head, and especially on the functions of the fifth pair, you have stated, that "M. Magendie really writes and speaks as if he had not read the papers containing these researches." It is not surprising that those who read his papers, or who heard his remarks, or who knows the manner in which he has since distributed his papers in London, should form this opinion. I was never more astonished than (when standing by M. Magendie on the occasion you mention,) to hear him state as a new fact, that the fifth pair was the nerve for the sensibility of the parts about the head,—that it conveyed, or continued, the sensibility from the spinal marrow to the head; and, that he wished to impress this upon his hearers as a *novel* fact was inferred, not only by his making the experiments to prove it, but also by his begging a gentleman near him to translate the above information for the benefit of those of his audience who did not understand French. I affirm, that at the moment I could not help believing that he had not read any of the numerous papers which had been published, or that he had forgotten all which I had told him about the fifth pair, when in Paris. With this impression I went home to examine his own Journals. I have made the following extracts from them, *being translations from papers which I had transmitted to him.* To those who may imagine that any of the functions of the fifth were discovered by M. Magendie, these extracts will afford sufficient proofs that, although injudicious friends may still endeavour to support his claim, he could scarcely have intended to take this merit to himself, notwithstanding the contents of his last papers.

"Le degré de sensibilité dans les deux joues était exactement

le même. Cette seule circonstance suffisait pour être sur que le nerf de la cinquième paire, était intact a tous égards mêmes dans les parties les plus inferieures de la face du côte droit."—138. *(Avril* 1822.)

"Pour constater l'integrité des branches de la cinquième paire dans le nez, je touchai l'intericur de la narine droite avec un plume, et aussitot des signes d'eternucment se manifesterent sur le côte opposé."—139.

These extracts are from the description of an instance of paralysis of the face, in which the portio dura only was affected, and were offered to prove that, since the sensibility of the parts was entire, the fifth nerve must still be perfect.

The following are from the description of a case of hemiplegia, and were given to prove that the fifth nerve of one side was affected.

"J'examinai après le degré de sensibilité dans les deux joues.

"On piqua la joue droite avec une aiguille, il resta parfaitement tranquille quoique le sang en sortit. On voulut faire cette operation du coté gauche, mais il retira la tête tout a coup et temoigna de la douleur. On observait la même difference de sensibilité en tirant un poil de sa barbe du chaque coté."

"On s'assura de l'état de la cinquième paire à l'intérieur de nez. En chatouillant la narine droite aucun effet ne fut produit, mais en chatouillant la narine gauche l'éternument s'effectua."

I have not thought it necessary to give the translation of these extracts, as the original papers may be found in the Journal of Science, and copious similar passages in the Philosophical Transactions; one of which I give from Mr. Bell's papers:

"The fifth is the universal nerve of sensation to the head and face, to the skin, to the surfaces of the eye, the cavities of the nose, mouth, and tongue."

I shall make only one other extract, which will be a conclusive proof that, in all the investigations into the functions of the fifth, its influence over the schneiderian membrane was considered an important part of the inquiry. After having, in the description of a case where both the portio dura and the fifth were injured, shown that one cheek and the corresponding side of the tongue were insensible, I made the following remark; and which, as it was copied into M. Magendie's Journal, I shall give in French:—"Nous oubliames de constater le degré de sensibilité de l'interieur de la narine aussi sommes nous tout a fait incapables d'assurer si les divisions de la cinquième paire qui se rendent dans ces parties étaient paralysées."

To make my position still stronger, I may repeat, that, while in Paris in 1821, I divided the portio dura and the fifth in a horse; and that a notice of the results of this experiment is given in M. Magendie's Journal for January 1822.

In the remarks on M. Magendie's papers, you have fallen into a slight mistake, in supposing that we had not experimented on the fifth, except upon the face; but that this had been first done by M. Magendie. By referring to the Medical and Physical Journal for October 1822, you will find that I had cut the nerve of an ass close to the brain, to show the effects of its division on the temporal and masseter muscles; and in the same paper it is also stated, that I irritated the nerve while in the spheno palatine fissure, to further prove the influence which it has, as a double nerve, over the muscles and the skin. In the Philosophical Transactions for 1823,* the following remarks are made by Mr. Bell:—"I have not been able to excite the motions of the eye by irritating the ophthalmic division of the fifth after the division of its root;" and in the same volume, in a note, he adds—"In attempting to excite the muscles of the eye by galvanism sent through the fifth nerve, the muscles of the jaw were affected."

Although the effects produced by cutting the nerves after their exit from the skull have more especially interested us, the circumstances just stated will show that the functions of every part of the fifth pair have been fully investigated. This will still be more clearly shown by the remarks which I shall take the liberty of adding to those you have already made, in criticising M. Magendie's views of the influence which the fifth has over the organ of vision.

The supposition of M. Magendie, that the fifth, and not the optic, is the nerve of vision, is founded on such slight grounds, that it scarcely requires serious refutation. Had an animal continued to see after the optic nerve was cut through, we might have been led to believe that there was no trick nor deception practised in the case of the famous Miss M'Avoy, of Liverpool, and that this young lady really could see with the tips of her fingers, as she pretended to do; because we know that the spinal nerves have been proved to be in every respect similar to the fifth, (M. Magendie's new nerve of vision.) But the truth is, that, although the fifth be paralysed, the vision is not destroyed; it is only impaired in a manner which can be easily understood. The following cases will not only prove

* "I cut a branch of the fifth upon the face; the sensibility of the corresponding side of the lip was destroyed, but little paralysis ensued, except of certain actions of the orbicularis oris. I cut the nerve nearer the brain, and at a point previous to its having given off the branches to the other muscles; then the jaw fell, and the muscles of that side were powerless. I varied the experiment by irritating the nerve where it lies in the spheno palatine fissure, immediately after an animal was killed. The jaws then came together with much force; indeed, so as to nip my assistant's finger severely. This last experiment may be compared with the very common one of galvanizing the nerves which pass from the spinal marrow to supply the muscles of the extremities."

this, but also that all the interesting circumstances regarding the eye have been previously described, either by Mr. Bell or by me. The extract in which the question of the effect of the fifth over the motions of the iris is considered, and in which it is also shown that, although the fifth was destroyed, the patient could see, was published by me in the Medico-Chirurgical Transactions for 1822.

"No explanation has as yet been given why the pupil should, in some cases of amaurosis, remain fixed and unaltered by the exposure of the eye to the different degrees of light, while in others it is as sensible to the stimulus of light as a perfect eye. It will be very difficult to obtain any conclusive evidence on this question; but circumstances seem to prove thus far, that the motions of the iris depend upon other causes than merely the state of the retina. They are perhaps, in a great measure, controlled by the fifth nerve. In support of this opinion, which however I offer as a mere speculation, I may adduce the common occurrence of a slight paralysis of the levator palpebræ, and of the iris, without the retina being at the same time affected. We know that the fifth pair supplies the levator palpebræ, and that the ciliary nerves which go to the iris are connected with it.

"A good example of complete paralysis of the levator palpebræ, and of loss of power in the pupil, without any affection of the retina, occurred last winter; and I was fortunate enough to have an opportunity of examining the body after death. A young woman had a fungous tumor under the jaw; the cheek of the same side was paralytic; the upper eyelid of the same side had fallen; but, when the eyelid was raised, the patient could see distinctly, although the pupil was fully dilated and immoveable. Upon dissection, it was found that the tumor had extended into the lateral part of the orbit; the fourth nerve ran over the tumor, the third was in the substance of it, but the ophthalmic division of the fifth pair was the nerve most destroyed; the sixth was partially affected. The tumor did not reach as far as the optic nerve. Since all the nerves of the orbit, except the optic, were included in the disease, we cannot draw any further conclusion from this case, than that the motions of the iris do not altogether depend upon the state of the optic nerve. The voluntary power which some individuals possess over the motions of the iris, will perhaps be considered as in some degree supporting the view which I have taken. The members of the Society are, no doubt, aware that one of their most distinguished associates has this voluntary power over the motion of his iris. Upon an occasion in which the gentleman I allude to, was so kind as to show me to what an extent he could exercise this power, I thought I could perceive that the exertion

which attended the attempt had some effect upon the motions of the upper eyelid."

In another case, which is noted in Mr. Bell's paper read before the Royal Society in March 1823, where there were indubitable proofs of the paralysis of the fifth pair, the patient could see; and this is proved in a curious way: for, so far was he from being blind, although the eye was insensible to touch, and the cornea even slightly opaque, he could perceive a red light even when the eyelid was drawn down. Some of your readers may remember the explanation of this—that, unless the eye turns up at the time the eyelids are closed, there is not complete darkness: this patient had lost all power of moving the eye.*

You have already mentioned the case which was transmitted by Mr. Crampton, of Dublin, to Mr. Bell. In this instance, also, although the ophthalmic division of the eye was paralysed, the young lady could see distinctly. With regard to the other phenomena which ensue when the fifth is destroyed, in the manner described by M. Magendie, I agree with you that nothing can be deduced from them; for I hold it to be almost impossible to destroy the fifth, in the manner done by M. Magendie, without injuring, more or less, some of the other nerves. It would, indeed, be very extraordinary if, after such an operation behind the orbit, and after depriving the animal of the power of closing the eye, a violent inflammation, such as is described, had not been excited. But, even in M. Magendie's reasoning upon this part of the subject, we have another proof of the justness of the observations in your Historical Retrospect upon the present system of making experiments. Thus, by the remarks which M. Magendie has made upon the animal not winking after the sensibility of the cornea is destroyed, he shows that he is unacquainted with one use of the eyelids, of which he could scarcely have been ignorant had he studied the comparative anatomy of the eye. Again, in drawing the comparison between the consequences of merely paralysing the eyelids by cutting the portio dura, and of rendering the eye senseless and motionless by his operation behind the orbit, he seems not to have known that, by his last experiment, he not only deprived the eyelids of the excitement to wink, but, by depriving the eyeball of motion, he put a stop to the movements of the hair, which forms a most essential part in the economy of the eyes of quadrupeds, being in fact a third eyelid, and which is not at all affected by cutting the portio dura. (See a paper in the Philosophical Transactions of 1823, by Mr. Bell.)

* I have seen this patient within the last ten days: his case, which is very curious and interesting, will be given in Mr. Bell's Work upon the Nerves.

I have thus, I trust satisfactorily, established the claims of Mr. Bell, to the discovery of the functions of the fifth pair of nerves; a duty which was incumbent on me to perform, as it was through me that the facts were obtained which have been made the grounds of a claim on the part of another. But I am happy to think that this is the last occasion on which there will be any necessity for such discussions, as, in the course of a few weeks, Mr. Bell will publish a connected account of his discoveries, with plans and illustrations.

London; July 3, 1824.

ART. II.—*Illustrations of the Efficacy of Compression and Percussion in the Cure of Rheumatism and Sprains, Scrofulous Affections of the Joints and Spine, chronic Pains arising from a Scrofulous Taint in the Constitution, Lameness, and Loss of Power in the Hands from Gout, Paralytic Debility of the Extremities, General Derangement of the Nervous System; and in promoting Digestion, with all the Secretions and Excretions.* By WILLIAM BALFOUR, M.D. of the University of Edinburgh.

[Continued from vol. li. page 462.]

CASE XXIV.—A lady, aged sixty-one, unmarried, consulted me on the 21st February, 1822, for rheumatism, of three years' standing, in her loins, left hip-joint, and whole of the thigh, which rendered her quite lame. The motion of the joint was so impaired, that she could not advance the left foot before the right, and, therefore, when she walked, it was by putting forward the right, and bringing up the left. Rotation of the thigh was also very obscure and painful, and a grating in the interior of the joint showed the articular surfaces were dry. From pain and weakness in the left loin, the patient leaned forward, and inclined manifestly to that side. The pain extended, anteriorly, to the crest of the ilium, top of the haunch-bone, downwards and forward into the groin; posteriorly, downwards behind the trochanter major to the tuber ischii (seat-bone). There was great pain also all round the neck of the thigh-bone, the base of the trochanter major, in the front of the joint exterior to the crural nerve and artery, and in the inside of the thigh, at the insertion of the adductor muscles. These were the most painful points, though the whole thigh, particularly the inside, was affected to the very knee.

This lady, from a false sense of delicacy, entertained an almost insuperable aversion to my mode of treatment. But it was the dernier resort—her only resource: all other means had failed, and her complaints were daily gaining ground. She was compelled, therefore, to submit; and, when she saw there was nothing in my mode of proceeding that could occasion a blush in a girl of sixteen, she regretted exceedingly she had been so long the victim of her groundless apprehensions.

Pain was soon removed from the tuber ischii, the base of the trochanter major, and crest of the ilium; but not so easily from the loins, hip-

joint, and insertion of the adductor muscles. By compression and percussion, however, alternated with passive motion of the joint, the affection of these parts was so far subdued in a month, that the patient could walk perfectly. Some of her acquaintance, whom she kept in ignorance of her making any further efforts to obtain a cure, congratulated her upon the improvement they observed in her walk and gait, remarking "she did not seem to limp at all now, and was as erect as ever." The operations were continued occasionally a month longer, when pain was completely removed from every part, and the use of the hip-joint perfectly restored.

In my preliminary observations, I have remarked that compression and percussion have a salutary influence on digestion. The observation was remarkably verified in this lady's case. After having attended her a fortnight or so, she asked me "if ever any of my patients felt hungry after my operations?" Being answered in the affirmative, she informed me she was obliged to take a lunch every day I visited her; a thing she had never before done in all her life. She delighted in the application of percussion to the loins, and often insisted on me to apply it with a force which I did not deem admissible. She felt pleasure in it, and as if it positively imparted strength to the weakened parts. The fact was, percussion removed pain, and, when that was effected, the parts performed their functions with ease.

In this case, the grating of the articular surfaces was greatly diminished at every operation, by the passive motion given to the joint. It continued to recur, however, for some time, then became imperceptibly more obscure, and finally ceased altogether. It might be imagined that the friction occasioned by passive motion of the joint, in a dry state, would have induced inflammation in its delicate membranes; but the reverse was the case. Those organs and vessels, whose function it is to prepare a liquor for the lubrication of the joint, were stimulated to a healthy action.

Case XXV.—A lady, about sixty years of age, unmarried, applied to me on the 21st February, 1822, for rheumatism, as she called it, in her neck, shoulders, back, breast, loins, glutei muscles, and hip-joints, accompanied with great debility. These complaints might have been allied to rheumatism in some degree, but that they depended chiefly on a scrofulous diathesis, was evident from many circumstances. One shoulder was higher than the other; the spine was distorted in several places; there was scarcely a rib that retained its original shape: those parts which were of a cartilaginous structure were most affected,—such as the spaces between the vertebræ, the cartilaginous ends of the ribs, the point of the breast-bone, the top of the haunch-bone, the anterior margins of the octabula. The disease had existed a great many years; and the patient's strength was so exhausted, that a very slight exertion, in the way of exercise in the open air, knocked her up completely. The restoration of strength, therefore, was with her the great desideratum; for, except when the parts were handled, or that she attempted exercise, her pains were very bearable. Indeed, she was not aware of the twentieth part of her ailments, till I pointed them out to her: but, having done so, I had no difficulty in persuading her (for she was a sensible

woman,) that, in proportion as the parts affected were restored to a healthy action, she would be enabled to take exercise in the open air, and the debility of which she complained would disappear.

Besides the local affections and general debility, there was in this lady's case a mobility, or susceptibility of impression from external objects, which required the utmost delicacy of management. The slightest movement, of which she was not aware, put her all in a tremor. It may well be supposed, then, that the operation of compression and percussion was performed, at first, with the utmost gentleness. But, such were its beneficial effects, that in a short time she could bear it in much greater force; and, in six weeks from the commencement of the operations, pain was entirely removed from all the parts affected with it. As to curing the deformity, it was out of the question: the patient was too far advanced in life, and the parts had been too long consolidated, to warrant the attempt. But she was satisfied with the degree of improvement she had obtained: pain was removed, the nervous system invigorated, so that she was enabled to take exercise in the open air, which restored and confirmed her health. She has enjoyed uninterrupted good health, indeed, ever since my attendance on her, and takes her amusement daily, as if she had never complained. This lady also expressed great delight in percussion; she has it performed every morning by her maid, and at any time of the day when her spirits fag, or when she catches cold. She considers it an invaluable acquisition, and is determined to practise it all the days of her life, as the very best means of preserving health.

Case XXVI.—I was called, on the 3d of February, 1822, to a woman, aged thirty-five, who had suffered greatly for six weeks from rheumatism in the course of the left collar-bone, at its connexion with the breast-bone and shoulder-blade, in the front of the shoulder-joint, and in the course of the brachial nerve to the bend of the arm. There was also a degree of fever present. The parts affected were always very painful; but, when a shower of snow fell, which was often the case about this time, the pain increased to such a pitch as almost to render the patient frantic. She had not slept an hour at a time for two weeks. Whenever she became warm in bed, the pain was so exasperated that she was obliged to rise out of bed altogether, or to lie above the bed-clothes; a situation I found her in at my first visit. Medicine had a fair trial in this case, without producing any good effect.

In this case, the whole nervous system was greatly affected, precisely like that of a person who has suffered long and severely from tooth-ache; and the parts affected were so exquisitely painful, that they could not be touched but in the most gentle and cautious manner. Percussion directly on the parts was inadmissible; but I applied it at a distance, so as to produce gentle concussion in them, with marked good effect. I proceeded in this manner a week, gradually increasing the force of compression, and slowly approaching the parts themselves in applying percussion, when I had the happiness of being told that my patient could lie a-bed, and enjoy sound sleep. The cure was completed in another week. I think it impossible to conceive a more decisive proof of the efficacy of any remedy, than is here afforded of the benign effects

of compression and percussion on the nervous system in a state of morbid irritability.

Case XXVII.—Miss A. E., aged twenty-three, became my patient on the 15th March, 1822, for acute rheumatism. She was constitutionally subject to catarrhal affections; had complained for some time of aching pains in different parts of her body, but had taken to bed a day or two only before I was called. Pulse 120, full and strong; skin hot and dry; considerable thirst; bowels slow. Complained of great pain and stiffness in the shoulders, elbows, wrists, loins, hip-joints, thighs, knees, and ankles. From neck to heel she was quite rigid, and lay in bed as immovable as a piece of cast-iron. I bled her to sixteen ounces, and ordered an aperient medicine; after which, she was to commence taking antimonial wine every two hours, in small doses at first, to be gradually increased as far as the stomach could easily bear. I then applied bandages to the elbows, wrists, knees, and ankles, which proved soothing to the feelings of the patient.

16th.—The bowels have been properly relieved; pulse softer, but not less frequent; thirst not quite so great. Has taken several small doses of the antimonial, and the skin is not so dry; rigidity of the muscles, and local pain undiminished.—Continue the antimonial as directed; the aperient (Epsom salts) as occasion requires; and the bandages.

I now commenced the application of compression and percussion to all the affected parts, giving passive motion at intervals to the joints. These operations were conducted at first with so much gentleness, deliberation, and perseverance, that it required an hour to go through them. As pain receded, however, which it did gradually, the parts could be handled with more freedom; and less time, in proportion, was requisite in going over them. After experiencing their good effects, my patient delighted in the operations, and was daily anxious for the arrival of the hour at which they were to be performed. By removing rigidity and pain from the muscles and joints, they soothed her feelings, and enabled her to turn and move herself in bed; and, so far from exciting the action of the system, the pulse was lowered, both in frequency and force, by every operation. It was uniformly rendered softer, and brought down, sometimes six, at others ten, and at others fourteen, strokes in a minute. By these means, a complete and permanent cure was effected in a fortnight, with very little diminution of the patient's strength.

That compression and percussion resolve local inflammation, and lower the action of the heart and arteries when in a state of morbid excitement, is a statement which, I have no doubt, will excite the surprise of many. It is a matter of fact, however; and facts laugh at scepticism. Besides, the problem, I think, is of easy solution. What, then, is the proximate cause, the essential nature of inflammation? Is it not tension, pain, heat, and redness of a part, occasioned by a preternatural afflux of blood to it? But compression relieves the gorged vessels of an inflamed part, and preserves them pervious; while percussion, by promoting an equal distribution of the blood, precludes its accumulation in a particular part. The local cause of disturbance in the system is, therefore, removed, and the chain of mutual influence between the local and general excitement is broken. Compression and percussion and

blood-letting are medicinal powers, equally mechanical in their application and in their proximate effects. They differ, however, in respect, that blood-letting cures by effusion, compression and percussion by diffusion, of the blood. The former debilitates in proportion to the extent to which it is carried; the latter occasions no shock to the system,—subverts none of the balances subsisting between either its proximate or ultimate principles.

Some of my professional readers may say—"Why did he not take thirty or forty ounces of blood at once, and as much more the next or second day, if necessary? By doing so, he would have extinguished fever at once; and the patient would have recovered strength at her leisure." But I would reply, that my object was to cure my patient, not to kill her; to remove disease, without occasioning a shock to the system which (the patient being of a slender make, delicate, and subject to catarrhal affections,) it might never have recovered. I acknowledge, moreover, that I am one of those who prefer efficacious, but safe, remedies, to dashing expedients, which, if they do not cure at once, are sure either to kill or to entail irremediable disease. Besides, copious bleeding, though it often lowers the action of the system with a vengeance, generally leaves rheumatism more firmly fixed than it found it. I have met with many such cases, and cured them by compression and percussion, without the aid of any other power. One gentleman applied to me, after having lost, under the direction of the late Dr. Gregory and Dr. Kelly, of Leith, forty-five cups of blood, which may be averaged at 225 ounces. The patient could crawl, but was incapable of putting on or off his clothes. Two operations of compression and percussion, on two successive days, restored the power of his arms so far as to render him comparatively independent; and the patient himself, assisted by his servant, completed the cure, by following my directions.

Case XXVIII.—On the 16th April, 1822, I was called to Mrs. C., whom I found in a state of great emaciation and debility; pulse 100, with exacerbations in the evening. This lady was evidently of a phthisical constitution, and several of her family had died of consumption; however, she did not labour under any pulmonary complaint at the time. I was called on account of excruciating pain in her right side, hip, thigh, and leg, of eighteen months' standing, and which had rendered her quite lame. The limb was so weak and pained as to be unable to support her weight, which was not great, and she could not move without help and support. On the whole, it is almost impossible to conceive a person in a more delicate, helpless, and distressed condition. She had no expectation I could do her any good; and sent for me merely in compliance with the unceasing solicitations of her friends, who summoned so many undeniable facts to their aid that she found her post untenable, and therefore, as every thing else had failed, consented to make trial of compression and percussion. So completely unhinged was the nervous system, and so tender and painful were the affected parts, that she trembled at the very idea of being touched.

I commenced my operations with a gentleness and caution which a new-born babe could scarcely have felt. I knew, from ample experience,

that I should soon soothe the patient's feelings, and dispel her fears. Accordingly, at the end of a quarter of an hour, she could bear to be handled with a freedom which, had it been employed at first, would have demolished her at once. At every touch, I made the nervous power thrill from the top of the haunch to the ankle, with a mixed sensation of pleasure and pain. From this time forth the operations, instead of being dreaded, were courted. Every day my visit was expected with impatience; and, at the end of a week, the pulse was brought down from 100 to 80 in a minute. In a fortnight from the time I was called, pain was entirely removed, the patient could walk perfectly, and has continued to do so ever since. This lady frankly, and *tua sponte*, attributed the melioration of her condition exclusively to my operations, and was pleased to speak of them afterwards with a partiality correspondent to the dread they had formerly inspired.

Case XXIX.—The treatment of the hip-disease has received less improvement from the moderns than, perhaps, any other to which mankind are liable. The practice followed at this very day and hour, is the same in substance with that laid down 2300 years ago. Not but that much valuable information has been obtained respecting the pathology of the disease, and the morbid anatomy of the parts. Nevertheless, little or nothing efficient has been added to the means of cure; the disease remains as intractable, as frightful, and as fatal as ever.

The mode of treatment pursued in the two following cases is not only different from, but apparently incompatible with, that recommended by the best and latest writers on the subject: but it is not to be condemned on that account. Facts will remain facts, in spite of preconceived opinions, and all the ridicule that can be levelled against them. It is no uncommon occurrence, however, to see facts brought against facts, by men of equal reputation and integrity; and yet there may be no paradox in the matter. A difference of circumstances in the application of any remedy, must surely affect the result. If, for instance, a practitioner, after reading this paper, were to adopt my practice, and without discrimination to apply it to a case of hip-disease already advanced to the second stage, he might greatly injure his patient. Were he hence to conclude that the practice is hurtful, instead of being beneficial in such cases, his inference would be perfectly correct; at the same time it would be a complete, though unintentional, misrepresentation of my practice. Nay, were the same practitioner to employ compression and percussion in incipient cases of hip-disease without success, any conclusion he might form against the practice would be erroneous, unless he performed the operation with the tact and skill which, from extensive experience and unremitting attention to the subject for a course of years, I have acquired. I am warranted in making this observation, from the consideration that I daily receive patients, and cure them in a short time, who have laboured for years under rheumatic complaints, and have been treated in every possible way by practitioners of the first eminence, without any good effect. In many such cases, compression and percussion had been resorted to after medicine failed, but with equally little benefit. Compression and percussion have therefore, most erroneously, been pronounced useless, if not hurtful. If the practice was either useless

or hurtful, it would succeed in no man's hands; but it succeeds in mine, after it has failed with other practitioners: *ergo*, my mode of applying it must be superior to theirs; and they have no right to deny a practice which is new to them, and success in the application of which can be attained only from experience.

J. R., aged eighteen, became my patient on the 14th of January, 1822, for the hip-disease, right side, of five years' standing. When about thirteen years of age, he one day suddenly experienced a sense of weakness, pain, and stiffness in the joint; to which he paid very little attention, as it soon went off. The same thing continued to recur, however, at irregular intervals, and with various degrees of intensity and duration. At length the complaint returned oftener, and with marked increase of all the symptoms. At the end of three years, during which the disease had been making insidious and imperceptible progress, the patient found his limb unable to sustain his weight, and the stiffness permanent. He could not now throw his leg across a horse. At this stage he had recourse to medical aid, and six wounds were made by escharotics round the joint, and kept open for some time, without affording the smallest benefit. In harvest, 1821, all the symptoms, particularly the pain, became greatly aggravated, and he was henceforth laid up. At this time another surgeon was called, who applied leeches to the joint, and afterwards blisters to the knee. Two large issues were made, by nitrate of silver, in the neighbourhood of the joint at the same time, and kept open for four months, without the least advantage. Mercurial ointment was now rubbed into the thigh, by advice of a third surgeon; which very nearly finished the patient.

When I first saw this young man, which was on the 14th January, 1822, his case was deplorable indeed. The hip and thigh were greatly emaciated, the former appearing quite flat. The skin of the thigh was dry, rough, rigid, and felt like a board. All the glands in the neighbourhood of the joint were swollen, and excruciatingly painful to the touch. Considerable effusion had taken place about the front of the joint, and there was a large fluctuating tumor upon and behind the trochanter minor, but which was entirely free from pain. A perpetual agonizing pain pervaded the whole joint, but was particularly severe on the front, exterior to the course of the femoral artery, reaching down to and behind the trochanter major, along the vastus externus muscle, and terminating in the knee. So intolerable and unremitting was it, that, for eighteen weeks, the patient had been incapable of suffering the limb to remain in any position for an hour at a time, and was therefore, in a great measure, deprived of natural rest. The anterior portion of the crest of the ilium was turned a little outwards, which increased the external cavity of that bone, and clearly evinced the nature of the disease, had there been any doubt on the subject. Pulse 90, small, and irregular; appetite impaired; bowels more regular than could have been expected. The limb was about an inch shorter than the other, and was always kept in a slightly bent position, so that the toes only touched the ground in standing.

I began my treatment of this case by the application of compression and percussion, followed by passive motion of the joint to the extent

the patient could suffer it. My expectations of success were any thing but sanguine. I anticipated nothing but suppuration, hectic, and death, —more especially as some members of the family had died of consumption. Notwithstanding, for reasons hereafter to be rendered, I considered this mode of cure the only chance in reserve for my distressed patient. The handling of the parts was at first necessarily very gentle; but I never visited this patient without leaving him easier, in regard to pain, than I found him. On account of the distance at which the patient resided, I saw him every other day only: consequently, a much longer time elapsed before any decided impression was made, than would have been requisite had the operations been performed daily. At the end of three weeks, however, his condition was so much ameliorated that he could sleep nine hours without interruption. This was of immense advantage, not only to the patient himself, but to his friends, one or other of whom had to attend him every now and then, even during the night, to alter the position of the limb. But, though the effects of the operations were now more obvious, decided, and permanent, the parts affected remained extremely tender to the touch, and unaltered in appearance. I spent an hour, at least, with the patient at every visit. One day I operated an hour and a half on the flexure of the joint and margin of the acetabulum, with the view of getting at some defined spots, which were extremely painful, and impeded the motion of the joint. I accomplished my object; and, though the patient was much exhausted, not only no bad consequences resulted from the exertion, but he never was so much pained afterwards. I now proceeded, therefore, with more boldness and effect.

The patient's general health, and consequently the diseased parts, were greatly affected by the state of the weather. The process of amendment was often suspended, and sometimes the symptoms retrograded, or threatened to do so. On such occasions I redoubled my diligence, and always with the desired effect. The operation of compression and percussion never failed to exert a benign and sanative influence on the parts affected, and also on the whole nervous system. This was not a vague conjecture; it was an effect, of which the senses were the evidence. The patient knew when he was relieved from pain; and I knew when he could suffer the parts to be handled with increased freedom, and when the motion of the joint was facilitated.

The reader may startle, perhaps, at the idea of compression and percussion changing the nervous system, or any part of it, from a morbid to a healthy state or action. It is, nevertheless, true. I have observed it in a thousand instances. In the present case, when I grasped the anterior muscles of the thigh below the trochanters, and raised them from the bone, the patient roared out from pain: when I compressed them, his sensations were pleasurable. Compression and percussion completely changed this morbid state of the muscles, so that they could be handled, and raised, and twisted at pleasure. Is this not changing the morbid state of the nerves into a healthy? The very skin was changed from a dry and rigid to a naturally moist and pliant state. The patient himself made the observation first. I have in many instances observed the same effect produced by compression and percussion; and

the fact admits of an easy explanation. When emaciation of the muscles takes place, the circulation in the capillary vessels must be languid in proportion: the latter, indeed, must be the immediate cause of the former; for, if the ultimate arteries continued to perform their functions equally all over the body, no emaciation of any particular part could take place. When, therefore, compression and percussion are applied to parts in a state of emaciation, the ultimate arteries are roused to action, the blood is brought to the surface and circulated equably;* the nervous power is conciliated and diffused; and, consequently, all the functions dependent on these must be performed more perfectly.

About the month of May, the patient complained of pain on the right side of the lumbar vertebræ, along the crest of the ilium, and in the muscles connected with these parts. He began to lean very considerably to the side affected, which gave the appearance of a curvature to the spine. When these parts were handled, the pain was most excruciating, which made me suspect it was all over with my patient, as one part was no sooner relieved than another was attacked with disease. However discouraging these circumstances, I continued my operations, and succeeded in removing the pain from the loins, much sooner than I expected; and it has never returned. The spine is also perfectly straight. But, though pain and effusion were removed, in a great degree, in a few weeks after the commencement of the operations, yet several months elapsed before any increase of flesh could be perceived. This might be owing as well to the wavering and imperfect state of the patient's general health, as to the local disease. About the month of June, however, his general health became more steady and confirmed, and an increase of flesh over the whole body, not excepting even the diseased limb, was very manifest. Finally, at this date, 12th November, 1822, the patient is in perfect health; pulse natural (66); the joint and limb are, and have been for a considerable time back, permanently free from pain; the tumor at the head and inside of the thigh is decreased one-third, is flatter, more moveable, and more compressible; effusion in other parts round the joint has disappeared; the glands are reduced to their natural size; rotatory motion is very considerable, not perfect; flexion and extension are perfect; the patient can rise from his back, with both limbs extended on a plane; standing erect, he can plant the foot of the weak limb on a chair; he can touch his chin with the knee, and his hip with his heel, and can place his heel on the opposite groin. The limb is gaining flesh daily; the margin of the gluteus maximus is beginning to assume its natural prominence; and the patient can walk without crutch or support of any kind. I saw his mother twelve months afterwards, who informed me, his health was completely con-

* This was beautifully illustrated in the present case, from the circumstance that, before I was called, the issue behind the trochanter major had been healed up for some time, but the scar retained an uncommonly livid colour. Compression and percussion had not been long applied, however, when it changed to a more healthy red, and gradually acquired a natural appearance. I made no mention of the change till it was noticed by the patient's mother, who observed that, "surely the operations were doing good, for the very colour of the wound looked better."

firmed, the tumor had nearly disappeared, and that the limb was perfectly serviceable.

I took several of my professional friends to see this case, who agreed that it was unique; and I think I may add that, if ever premises warranted a conclusion, the history of this case authorises me to say, had the patient been treated by compression and percussion at the commencement of his illness, or even after it had existed for some years, the disease would have been arrested *in limine*, and all the subsequent distress which he suffered, would have been prevented.

In addition to the facts of the case, it will naturally be expected I should assign my reasons for attempting to cure by *motion* a disease, for which *perfect rest* is universally prescribed. They are as follow:—

The success I have had for a number of years in curing rheumatism, of every degree of inveteracy, by compression and percussion, has induced many to apply to me for the cure of chronic pains arising from ricketty and scrofulous constitutions, the patients imagining their complaints to be merely rheumatic. Whoever, indeed, has had much experience in the treatment of rheumatism, must have met with many such cases. I always consider that case to originate in scrofula, where cartilaginous parts and their coverings are chiefly affected, and where there is general debility at the same time. For instance, when the pain is confined to, or chiefly affects, the cartilages of the ribs, breast-bone, vertebræ, crest of the ilium, or the joints, attended with general debility, I consider the disease to proceed from a scrofulous constitution. Now, in applying compression and percussion to the soft or muscular parts, which in such cases are also often very painful, and sometimes knotted, I found the practice attended with the most beneficial effects on the cartilaginous parts also; and that it removed that undefinable exhausting pain and uneasiness, which are both a cause and an effect of the general debility accompanying such complaints. I therefore came to follow the same practice in every such case as I did in cases of pure rheumatism, and with equal success. Compression and percussion, by removing pain, indirectly strengthens the patient; more exercise can be taken in the open air; the digestive organs are improved, and the general health is restored. Having, therefore, observed such effects from compression and percussion in cases of chronic pains and general debility, arising from a scrofulous taint in the constitution, it was most natural for me to conclude that the same practice would be beneficial in scrofulous affections of the hip-joint. Thus, the adoption of the practice followed in this most interesting case, was not a random experiment—a bow at a venture, but the result of observation and induction.

Pathologists agree in attributing scrofula and rickets to a deficiency of phosphate of lime, as their proximate cause, arising either from an inordinate action of the absorbents or from deficiency of action in the ultimate arteries, whose function it is to secrete phosphate of lime. From the effects of compression and percussion, as illustrated in the preceding case, I apprehend the latter to be the truth; for, under their application, the progress of debility is arrested, the distortion of bones is rectified, and the bones themselves are restored to their former strength. These effects must be owing to the renewed secretion of

phosphate of lime, produced by the excitement of the ultimate arteries: and, if compression and percussion promote the secretion of phosphate of lime in the bones, much more so in the soft and fluid parts; for it is a proximate principle of the soft and fluid parts of the body, as well as of the bones. It is, therefore, easy to comprehend, that a mode of treatment which promotes the renewal of a proximate principle, in the deficiency of which debility consists, should arrest the progress of debility.

Case XXX.—I was called to Mr. S., aged sixty-six, on the 20th April, 1822. About fourteen weeks before this, he fell one evening, going down a stair, on his right haunch, and felt so much hurt, that he could not return home without help. A surgeon was immediately called, who declared that neither fracture nor dislocation had taken place; and, of course, that the accident was of no consequence. The patient continued for some days, however, to experience considerable pain in the limb, from the hip-joint to the ankle inclusive, which prevented motion entirely. Another surgeon was now called in, who also pronounced the injured parts to be free from fracture or dislocation, and recommended that they should be anointed with linimentum ammoniatum. This gentleman must also have considered the case as of no importance, as he did nothing farther in it. Notwithstanding, the parts around the hip-joint continued painful to the touch, and therefore were never touched. Any attempt at motion of the joint was also attended with excruciating pain; of course, the limb was constantly kept in a state of perfect rest. The patient lay in bed for the most part, or, if he came out of it, he made use of a crutch, and kept the limb in the half-bent position; so that the joint suffered no more motion than if it had been a continuous bone. Fourteen weeks passed over in this way, without the smallest prospect of his ever being able again to set his foot to the ground; though there was no where any external appearance of injury or disease: the whole limb was pained, and so œdematous below the knee, that the skin was about to crack in many places.

Had the patient's constitution been sound, the accident that befel him would most likely have had no bad consequences. He was a light-made man, and, as has been observed, there was no external appearance of injury, even on the parts which came in contact with the stones on which he fell; so that the gentlemen who preceded me were perfectly justified in considering the case as trifling. But, after the lapse of so many weeks, during which any taint that might exist in the constitution had time to develop itself, matters assumed a different aspect. There could now be no manner of doubt that the case was one of hip-disease, occasioned by the accident. The pain in the hip-joint and at the knee, on attempting motion,—the grating of the articular surfaces, on passive motion being given to the joint,—the aspect of the patient,—all concurred in proving that the effects of the accident proceeded from a scrofulous taint in the constitution, brought into activity by external violence.

Expecting I would satisfy myself with prescribing some liniment to the parts, the patient, when I began my operations, regarded me with astonishment, and hesitated not to affirm that, instead of being benefited,

much injury could not fail to result from such a mode of proceeding. Indeed, had it not been for the respect I entertained for his friends, I would not have touched this obstinate and unreasonable man a second time. After a few operations, however, when he found the motion of the joint increasing, and the pain in and about it decreasing, the reception I met with was very different. Now he was all deference, submission, and apology. The consequence was, that in a week the motion of the hip-joint was restored; and, in three weeks from the time I was called in, he was walking the streets. The œdema of the leg had by this time also disappeared.

Here, then, is another case of hip-disease, the progress of which was arrested by compression and percussion. It may be said that other means might have arrested it as well as compression and percussion, had they been tried. I do not deny it. I only affirm, that compression and percussion, combined with passive motion of the joint, did arrest the disease, and in a much shorter time, too, and with much less injury to the system; because a copious and long-continued discharge of purulent matter, by issues or otherwise, though it may sometimes cure the local affection, much oftener saps the foundation of the constitution. It cannot, in the nature of things, be otherwise. Was there ever yet a human being seen to have a healthy appearance, with an active issue of any continuance? Compression and Percussion, on the contrary, strengthen the whole frame: consequently, the patient is much sooner enabled to avail himself of exercise in the open air, which, as it is necessary to the preservation of health, must contribute essentially to the cure of disease. Had I, in the case under consideration, advised the repeated application of leeches, of scarification and cupping, and ultimately issues in the neighbourhood of the joint,—what would have been the inevitable consequences? Much longer confinement and great diminution of strength, which, combined, might have given a fatal predominance to the scrofulous diathesis.

From the effects of compression and percussion, combined with passive motion of the joint, in this case, after matters had assumed so formidable an aspect, it certainly is not too much to infer that, had these means been employed at the beginning, the consequences of the accident would not have occurred. It is much easier, surely, to prevent than to cure disease; and that remedy which has the power of arresting the progress of any malady after it is confirmed, would unquestionably prevent its proceeding to any extent, if early employed. This is as clear and conclusive as that twice two make four. How many, then, of both sexes, and in all ranks of life, might be rescued from an early grave, or from irremediable debility and deformity, by timely combining with other remedies the simple operation of compression and percussion!

[To be continued.]

Art. III.—*Anomalous Case of Enteritis, with Remarks.*
By Edward Blackmore, M.D.

November 8, 1822.—H. Williams, æt. thirty-eight, a labourer, strong, muscular, has been sickening, with slight pain at the stomach, for several weeks, during the last of which the pain has been severe: it is not increased by taking a full breath, and seems to be relieved by pressure; belly not tense or tumid; pulse 80; vomiting; constipation; urine high coloured. Bled to twelve ounces; enema purgans; jalap *c* cal.

9th.—A scanty stool from two glysters, pain aggravated after the second; thirst and fever. Injection of folior. nicotian. tabaci ʒj. infused in a pint of water. Injection caused faintness, sweats, and two mucous stools; pain at heart continues, with retchings.

10th.—No dejection, no pain on pressure; pulse 64, tongue fouler. Ol. ricini, ℥j. *c* Tr. opii, ʒss.

Evening.—No dejection, no pain; feels exhausted. Cathartic continued.

11th.—Three stools; slight rigor, and gnawing pain at navel. Cathartic continued.

12th.—More pain and tenderness; vomiting; belly tumid; great tenesmus. Bled to ten ounces.

13th.—Urgent vomiting with severe pain, which is relieved by hot fomentations; tenesmus; no stool since the 11th. Mustard cataplasm to belly; anodyne injection.

Mid-day.—Seen in consultation with my friend, Dr. Cookworthy. Much tenderness of belly; pulse 64, full and firm; tongue furred and white; some stupor from the laudanum injection. Bled to twenty-five ounces. Pulse rose to 98, softer. Calomel, gr. j. every four hours. No hernia exists.

Evening.—Pulse 64, tense; no vomiting since the morning; sickishness and eructation. The pain has changed its seat, and is now affected by pressure. Voice weak and plaintive; urine scanty, red, not turbid; no stool for forty-eight hours; belly not tumid, but there is slight hardness at the navel. Bled to twenty ounces, when the pulse rose to 100.

14th.—Much pain through the night, relieved by a jar of hot water to the belly; pain is deep-seated, and increased by pressure and on taking a full breath; no stool; great tenesmus; urine scanty and red, with much sediment, like cretaceous powder; tongue furred, white; belly not tumid; slight retching; pulse 96, tense, and not small. Bled to twenty-four ounces, when he became deadly faint and convulsed; pulse at wrist gone for three minutes; revived by aspersion of cold water. In ten minutes, pulse 120, small; pain quite gone for some time, then

again felt. Continue calomel, gr. j. every four hours; salts and senna.

Evening.—Pulse 116, tense and small; belly more tense and tumid; strong retching, hiccup; pain still increased by pressure. A tobacco injection caused giddiness, but did not affect the pulse. No stool for seventy-two hours; urine red, with copious sediment. Has taken calomel gr. xj.; vomited; senna. Twelve leeches to belly, and cataplasm afterwards.

15th.—Slight pain on pressure; belly still tumid, with hardness on the right side; pulse 112, less sharp; vomiting of a clear fluid; a whitish, scruppy, fecal dejection, from the tobacco injection; look and voice improved; tongue furred, brownish. Twelve leeches; glyster of salts and senna. Calomel, gr. j.; Antim. pulv. gr. iij. every four hours.

Evening.—Much tenderness at lower part of the belly; slight retching; pulse 120, compressible; urine copious, less red and turbid. Three stools of small fecal particles. Glysters and medicines repeated.

16th.—Many feculent stools, much turbid urine; slight ptyalism and mercurial fetor; some tenderness of belly; tongue brown; thirst and faintishness; pulse 112, small and soft; has taken calomel ℈j. Continue calomel and antim.; mist. salin. ex citrat. potass.

Evening.—Pulse 98, soft; belly bears strong pressure; slight colic; many dark feculent stools; much urine, of lighter colour. Extract. humali lupuli, gr. x.; ol. ricini, ℥j.

17th.—Pulse 100, soft; many dark bilious stools; tongue fouler. Omit calomel and antim. Continue ol. ricini, &c.

18th.—Many stools; tongue fouler. Continue mist. salin.

20th.—Two large formed stools; slight pain at heart, from eating an apple-dumpling; pulse 104, full. Mist. purgant. ℥iij.

21st.—Mouth sore; convalescent.

None of the blood drawn was at all buffy or sizy; the crassamentum was convex, and not very firm. The blood coagulated at once, and was all of the same colour.

Reflections on this Case.

1. In attempting to refer this disease to its proper seat in Cullen's Nosology, I find that one very important character of his class, Phlegmasiæ, is wanting,—"sanguis missus superficiem coriaceum album ostendens." When the case was first seen, it had all the characters of Cullen's definition of ileus or colica, and I should refer it to species 3, Colica Stercorea, or Ileus, a fœcibus induratis. Some medical writers err in supposing that stercoraceous vomiting is essential to constitute this disease. Celsus simply remarks, "Si superior pars intestino-

rum affecta est cibus, si inferior pars sterca, per os redditur." And Van Swieten terms constipation of the bowels from inflammation, ileus. In one point, however, the character of colic was wanting in the present instance: the pain did not, from a state of ease, become acute. (*Pemberton*, page 175.) Although there was not a strong expression of pain, I believe there was constantly an obtuse pain at the navel. Is the disease then to be considered inflammatory? It wants the character, "dolor abdominis pungens," of Cullen's general definition of enteritis; nor has it the character, "pyrexia vehementi," of the species phlegmodea. It has the character, "pyresia lexion," of the species erythematica; but it wants that "cum diarrhœa!" Moreover, the pain is not tensive, that of the phlegmasia; nor burning, that of the erythema, which is the sort of inflammation that for the most part affects mucous membranes. The disease also wants Good's character of enteritis, "tension and tenderness." The pulse wants Baillie's character, "frequent, small, hard:" it is slow, large, and hard, more like the pulse of acute rheumatism.

The little increase of pain on pressure, and the want of tension, are given by Pemberton as characters of disease of the mucous membrane of the intestines: these are seen in this case, but other important marks are absent. The disorder is not peritonitis, for in this the tenderness and tension of the belly are distinctly marked.

The nature of the disease might seem at first to be obscure; the symptoms are perplexing; many characters usually considered to mark the existence of inflammation, are absent. The inflammatory character of the disease is, indeed, more manifestly developed on the 13th; but I am inclined to think that inflammation existed from the first day I saw the patient, and that its seat was the muscular coat of the intestines.

First. We have satisfactory evidence that inflammation may exist in the intestines to a fatal extent, where there has been little, if any, expression of pain. This is a most important fact, and it should be strongly impressed on the minds of young medical practitioners especially, since the statements of some of the most popular medical authors are calculated to mislead in this particular. Thus, Dr. W. Philip remarks, in his "Symptomatic Fever," page 225, "Our best diagnostic of pain attending enteritis is, that it is greatly increased on pressure." Now let us hear Morgagni, Ep. xxxv. art. 20, "Nec tamen si quando alterum vel utrumque horum (dolorem et acutum febrem), aut abesse aut vie esse invenies, continui putabis; aut nullum esse inflammationem aut levem; neque gangrenam et sphacelum in eorum esse intestini, non posse, in quibus duo illa præcecisse non videbis. Albertinum mihi inculcaverit, post

leves dolores, nulla manifesta febre, nullo vomitu, animo ac corpore satis vigentibus, de inopinato vidisse ægros in præceps ruere et citò eripi ab latenti inflammatione. Se periculum intelligere ex pulsu humili et debili, sibi sub obscure dissimili; ex abdomine tenso, duro, cum dolore quodam; ex facie insoliti aliquid, sed in aliis aliud, ostendenti!"

Second. The existence and the degree of inflammation of many vital organs, cannot be judged of by the degree of existing pyrexia.

Mr. Hunter has beautifully remarked on the great diversity of the constitutional disorder arising from inflammation situated in vital organs, and in those not vital. In the one case, the whole system is in an uproar,—all is energy and activity; in the other, the system is calm, and submissive, and depressed, as if conscious it was assailed by a foe, whom to resist would be only to exasperate, and render the fatal issue of the conflict more sure and speedy.

Again, it is established, by the observations of the best pathologists, that the state of the pulse, as to frequency, cannot be relied on as affording an evidence of the presence or absence of local inflammation. Baillie, speaking of strangulation of the intestine, remarks, (*Morb. Anat.* p. 212,) "The pulse sometimes is not increased in frequency beyond the standard of health, and yet the inflammation of the bowel has been discovered, by the operation, to be very great." Prosper Alpinus admonishes, "Id memoriæ mandandum, ut nunquam ex solis pulsibus malum judicium feramus; sed aliis signis unà conspectis ac simul collatis." Abercrombie also makes these practical conclusions, from very sufficient premises, "Extensive inflammation may be going on, with every variety in the pulse, and without constant pain." Fordyce accounted the "hard pulse a pathognomic symptom of coma, or inflammatory fever, and that this state is characterised by buffy blood; whereas, in the obstructed pulse, the blood coagulates at once, and is all of the same colour." In the present case, we have the firm pulse without the buffy blood. Nor is the remark of Sinnertus exactly fulfilled here, "Pulsus validus et vehemens facultatem fortem monstrat; simul irritationem magnum significat:" at least, this case shows that the converse of this proposition is not invariably true, and that there may exist much vital power, (as is manifest from the large abstraction of blood requisite to impress the system,) and great irritation, without the pulse being strong and vehement.

Lasily. A buffy state of blood is not invariably connected with the existence of inflammation. Van Swieten remarks, (*Comment.* vol. iii. p. 47,) "Adsunt ergo talis sanguinis diathesis, licet nulla inflammatio adesset, at contrà, in validissimis

inflammatoriis morbis aliquando nulla talis crusta in sanguine apparint; quod tamen pro malo omine semper habita fuit."

It is of importance to remember that the constitutional disorder consequent on local inflammation, or irritation, greatly depends on the habit of body in which the inflammation occurs. In delicate, sensitive, irritable bodies,—such, for example, as those of children and females tenderly brought up,—we should expect, and we find, the general disorder to be great, even where the local disease is small: while in stout, muscular, hardy bred labouring men, it requires a very powerful irritation to rouse the torpid actions of the system. In looking for the concomitants of disease, and estimating the power of remedies to be employed, these considerations must never be forgotten.

II. On reviewing the treatment of the present case, it will be remarked that purgatives were very sparingly used, before the inflammation was thought to be subdued by large blood-lettings. This to some may need a little vindication. In the general treatment of diseases, it is usual to employ two or more various means which agree in fulfilling the same intention, and produce a like ultimate effect. Thus, purging is held to be a useful auxiliary to blood-letting, in subduing inordinate vascular action. But it should be considered whether, from the particular seat or accompaniments of the disease, that means which is ordinarily an auxiliary in the curative plan, may not be inexpedient in the particular example. For instance, vomiting is a useful auxiliary to blood-letting, in the cure of many inflammations; but, if there exist a disposition to coma from determination of blood to the head, an emetic is said to be counter-indicated. Let us consider whether purging be not, in like manner, counter-indicated when inflammation of the intestine exists. In this state there is obstinate constipation, ξενοχωρια, "cura via ob carnem annatam vel tumorem in meatu existentem clauditur!" And it seems to be a maxim of sound reason, "evacuationes per alvum nunquam excitandæ, nisi viæ ad materiam emittendam propriæ patescunt." (Home, *Principia Medicinæ*, p. 49.) Now, what is the state of the lumen of an inflamed intestine? "Probatur naturaliter satis angustum esse intestinorum cavum: ubi ergo inflammatorius tumor nascitur in quodam intestinorum loco, non mirùm integrè claudi illud spatium, ita ut nihil transmitti possit." (Van Swieten, vi. 261.) "Tali ergo obstaculo nuto, quod transitum impedit, sistuntur ad hunc lomen omnia ingesta." And what is the action of a purgative on the intestines? "Pars intestini lacissita a flatû aeri aspero constringetur, etiam a morte, vehementissime, in sede cui stimulus adplicatur, liberat se distendenti infesto corpore, id expellit in partem proximum laxi intestini; quæ eadem vi stimulo iterum contracta, repellit utrinque acceptum. Hic

motus peristalticus, modo in una moxo in alia intestini sede peragitur, absque certo ordine, ubicunque aer cibusve stimulum admoverit." (HALLER, *Primæ Linæ.)* Now, if a purgative thus excites the movements of the intestines, and derives more blood to them by its irritative effect, and brings their contents to a part which they exasperate, but cannot pass, must it not augment the inflammation and the inverted action of the intestines, and lead to stercoraceous vomiting? How oftentimes do we remark an increase of pain in such cases, on the operation of a purgative. "At si colicum affectum," remarks Trallian, "ob inflammationem intestini fieri contingat, neque omnino exhibere audebis purgationem in his, et præcipue in initio cum inflammatio nondum ad coctionem pervenerit. Qui enim medicamenta ventri ducendo apta præbere non dubitârunt, ægrotantibus periculorum autores et mortis extiterunt!"

For the contrary practice, it may be urged that, in many cases, the retained fæces are the cause of the inflammation, and at least must aggravate the inflamed part; and, therefore, as you should extract a thorn from the flesh, you ought likewise to evacuate the irritating fæces. In opposition to this, I refer to Case v. in Dr. Abercrombie's paper on Ileus, in the Edinburgh Medical and Surgical Journal, a case very similar to the present, where the intestine was found inflamed, distended, and gangrenous, but the diseased part contained no consistent fæces! And I see no reason to believe that there ever exists in the small intestines consistent fæces, which may be a mechanical irritant to them, in the way that sequelæ are in the dysenteric affection of the large intestines. I cannot think that purgatives are proper in any inflammatory affection of the intestines, except only in chronic dysentery; and then the mildest alone should be employed. I decidedly dissent from the precept of Home, in his Principia Medicinæ, "Purgantibus lenissimis uti et si hæc nihil profuerint, acrioribus!" The warm bath, enemata, and local blood-letting, would be most proper to be used in the alternative.

In similar affections to the present example, opiates are often combined with purgatives, to keep them on the stomach; and an effervescing draught is given to allay the vomiting. I doubt the propriety of both these measures. The vomiting is an effect of the disease, and, for the most part, a correct index of its violence and progress. It surely cannot be right to rob ourselves of such an evidence, and lull ourselves into repose in the confidence that the danger is over, because it ceases to be apparent. In simple cases of colic, indeed, without inflammation, it is right to settle the stomach, in order to keep medicines on it; as, when the bowels are opened, the disorder is generally at an end: and, to effect our purpose, nothing is more useful than to

exhibit the medicines in the smallest bulk and the driest form, positively forbidding any liquid to be drunk. "Anti ex inferiori parte spiritus transmittitur magna cura vitandum est ne quid bibat." (CELSUS.)

I consider the precise seat of the inflammation in the present case to be the muscular coat of the small intestines. Bichat has taught physicians to use more exactness in assigning the seat of diseases; and we now believe that inflammation may exist in one texture, muscular, serous, or mucous, for some time before it spreads to the adjoining textures. Little advance has, however, been made in this very exact pathology. Dr. Abercrombie has remarked, that the symptoms and the morbid appearances of ileus will accompany enteritis only when the inflammation is seated in the muscular coat; and, on the case before referred to as similar to the present, he asks, "Was the inflammation confined to the muscular coat, producing ileus, but not accompanied by symptoms of acute inflammation, till a few hours before death?" We well know how inflammation of the muscular texture destroys its action; if the substance of the heart is inflamed, the pulse is confined and unequal, and at times, for a few minutes, ceases altogether. It appears also to be the character of inflammation of the muscular texture, that it is of slow progress; and that it exists to a slight extent for some time, without great constitutional disturbance. This is seen in some varieties of rheumatism.

The obscure character of the present case at the beginning misled me into a practice, if not hurtful, at least inefficient. It will teach me anxiously to scrutinize every example of disease that is not fully developed, and that has not all the usual accompaniments. It impresses on me the wisdom and value of the admonition of Sydenham: "If we so diligently penetrate into the secret recesses of every disease, as to be able to discover it lying hid under irregular symptoms, it will presently appear of what species it is, and be easily referred to the sort to which it belongs. Moreover, the method whereby such diseases are to be treated must be accommodated not to counterfeit symptoms, but to the disease itself, whatever it is, as if it were perfectly formed, and naturally existing." (PECHEY's *Sydenham*, p. 204.) It is well to understand our errors, and gather wisdom from our ignorance. He is not the wise physician who assigns a name to a disease, and exhibits remedies for its cure, because it has been so done before him. Nor is he the experienced physician, who has merely named and prescribed for any number of cases, ever so large. But he is wise and experienced who has truly observed the nature of maladies, and who knows to select the remedy suited to every various state of disease, and on whose mind the few important and rational principles of

medicine have been deeply imprinted by important facts. "Ainsi le meilleur medicin n'est pas, comme le prejugé suppose, celui qui accumule en aveugle et en courant beaucoup de pratique, mais celui qui ne fait que des observations bien approfondies, et qui joint à ces observations le nombre beaucoup plus grand des observations faites dans tous les siècles par des hommes animés du même esprit que lui. Ces observations sont le veritable experience du medicin." (D'ALEMBERT.)

Plymouth; May 1824.

ART. IV.—*Case of Formation of Pus in the Stomach, and of Wound in the Thumb caused by the Dissection of the Body, in the Person of* W. H. CALLOW, Esq. *Surgeon of the 96th Regiment of Foot.*

Case of Thomas Abell, aged twenty-two, Private Soldier in the 96th Regiment.

THOMAS ABELL reported himself sick on the morning of the 3d of April, complaining of violent pain in epigastrio, with incessant vomiting; pulse 120, small, and hard; tongue loaded, brown, and dry; surface cold; bowels constipated. Eighteen or twenty ounces of purulent matter was discharged from the stomach in my presence. Shortly afterwards, the pain shifted to the vicinity of the umbilicus, where it remained fixed, and the case assumed the unequivocal character of enteritis. Within the next twenty-four hours, depletion to the extent of one hundred ounces was effected, by the lancet and by leeches to the abdomen. Cathartics were repeated, till several evacuations of fecal matter were produced, mixed with which considerable quantities of pus was observed. The warm bath was frequently used, and fomentations constantly applied to the abdomen. On the afternoon of the second day, considerable amendment appeared to have been effected, and some hopes of recovery were entertained, when, in a violent fit of vomiting, the patient suddenly expired.

Sectio Cadaveris of Thomas Abell.—Upon view of the body, no tumefaction or inflation of the abdomen was perceptible, nor any external discoloration.

The subject was of full muscular formation, and a considerable layer of fat was found to extend over the external abdominal muscles.

The first division of the peritoneum presented the omentum slightly injected, the small intestines bearing evidence of generally diffused inflammatory action, to a limited degree; no approach to sphacelus, or disorganization of any kind, being to be detected in this part of the canal.

The viscera were found enveloped in pus, which was ultimately

discovered to occupy the entire cavity: in quantity, about thirty ounces were extracted; and the quality appeared bland, and of perfect formation.

Proceeding to examine the stomach, pus in large quantity was seen to gush from under it, upon the first interference with its position; a lacerated aperture was briefly discovered in the posterior part, approaching the small curvature, which extended on all sides, upon the most gentle attempts to raise the viscus from its position; a considerable portion of the parietes of which, surrounding the pylorus, and the posterior part of the small curvature, were in a state of complete disorganization.

The contents of the stomach appeared to have been exclusively pus, with one exception; that was, a substance which had assumed the shape of an egg, and was about the dimensions of that of a pullet. It had the appearance of ingesta, possibly cheese; was evidently of a single substance, granulated in texture, without any nucleus, and of a consistence that but barely admitted of removal.

The duodenum was occupied by pus; but the small intestines were void of fæces, or contents of any kind. The canal was not in any part contracted, nor were the intestinal coats indurated or thickened. The evidences of inflammatory action having existed to a considerable extent, were very general.

The liver and other viscera of the abdomen were separately examined, and found of healthy structure; as were equally the contents of the thoracic cavity.

The most extraordinary circumstances attending this case are, that the patient continued to fulfil the duties of hospital-cook till the day of his admission into a sick ward, which was but thirty-four hours prior to his decease; that no antecedent indisposition was complained of, nor the least emaciation produced, while pus, to the extent of at least seven pounds, was forming in one of the most vital organs.

Subsequent inquiries have elicited information, that this patient was habitually disposed to an immoderate use of spirits; that recently he complained to his comrades of great diminution of his accustomed strength, and an inability to retain any food long upon his stomach; but he was never heard to express himself in pain, till the morning he reported himself sick.

It is worthy of remark, that pus, as long as it was contained in a cyst, evidently excited but trifling irritation in the alimentary canal, except when the magnitude of the abscess, and its apparent situation near the pylorus, obstructed the passage into the duodenum. But the moment the rupture of the cyst brought its contents in contact with the mucous tissues, their excitement to a state of active inflammation ensued. There can be but little hesitation in concluding, that the sudden termination of

the case was occasioned by the rupture of the attenuated coats of the stomach.

Case of W. C. Callow, Esq. Surgeon of the 96th Regiment.

The morbid examination of Thomas Abell occupied a considerable interval, from a desire to place beyond a doubt the situation the abscess had occupied; the parietes of the stomach being generally in such a state of disorganization, that no distinct cyst was apparent: the liver, therefore, and successively each of the abdominal and thoracic viscera, were separately examined.

During a period of more than two hours, the operator's hands were necessarily immersed in the purulent matter, with which every part of the abdominal cavity was deluged. A small puncture was received in the thumb of the right hand, from a spicula of bone, during the investigation; but, as this was an accident, the occurrence of which had been several times repeated, without any unpleasant results, in former morbid examinations, the present instance scarcely excited notice. The succeeding day was one of much bodily fatigue, preparing to leave the regiment for a few days, on a hurried visit to London on business of importance; the journey towards which was commenced, by mounting a stage-coach at five o'clock that evening. At midnight, without any premonitory symptom, an acute pain suddenly planted itself in the situation of the puncture in the thumb, which was immediately succeeded by a shivering fit.

The fact of the absorption of virus was now evident, and the anxiety occasioned thereby was excessive. Immediate remedies being requisite, the accidental situation in the midst of a journey became perplexing. Two measures only offered for selection, —either to descend at the first inn upon the road, and immediately to have recourse to remedies among strangers; or to proceed fifty miles further, where, fortunately, the residence of relations and friends offered greater facilities, and rendered success much more probable: the latter alternative was, therefore, adopted.

The period required to reach this wished-for asylum was one of extreme mental anxiety, and acute bodily suffering; the thumb and three first fingers momentarily becoming more painful, with the most violent rigors rapidly succeeding each other. The distance at length accomplished, retirement to a warm bed was instantly adopted, and the assistance of medical friends immediately summoned. For some hours after this period, the most deadly coldness pervaded the whole frame, more especially the lower extremities, which were almost void of feeling and nearly deprived of circulation; while the hand was assuming

much tumefaction, and the pain was extending up the fore-arm. After the continuation for a considerable time, with much assiduity, of the application of artificial heat to the stomach and to the lower extremities, a most violent stage of reaction set in. The sensations experienced during this paroxysm were of the most insupportable nature, and certainly bore a stronger affinity to an attack of hydrophobia, than to any other disease to which it could be assimilated. The degree of heat upon the surface was such, that one limb could not be borne in contact with another. Pain in the head was so violent, with such a feeling of internal heat, that the brain appeared on fire. Rapidly succeeding spasms of the diaphragm threatened to suspend respiration.

Deglutition of fluids was rendered most difficult, while thirst was excessive. The stomach became extremely irritable. A severe pain seized upon the loins; the affection of the hand and fore-arm became agonizing; while vivid red streaks in the course of the lymphatics indicated the progress of absorption of the poison. The warm bath at this period produced a profuse perspiration, and was attended with very salutary effects; and the abstraction of blood from the arm by leeches sensibly diminished the pain, and restrained considerably the tension; but these measures, aided by the most direct sedatives and cathartics, appeared to exert their influence but a few hours, when every symptom became exasperated: the pain and tension occupied the whole of the fore-arm, and the inflamed line of the lymphatics reached the inside of the elbow-joint. Recourse was again had to leeches, with immersion in warm water of the whole limb. Successively the paroxysm returned, and more or less relief was invariably obtained by the assiduous repetition of the measure, especially by leeching, and the immersion of the limb in very hot water.

Two days after the commencement of the attack, the axillary glands had become enlarged, and were very tender to the touch. A stage of excitement, and consequently exasperation of all the symptoms, regularly set in every twelve hours; at which time a very severe pain occupied the right side of the thorax, and occasionally rendered respiration difficult; but the progress of the absorption was evidently arrested at the bend of the fore-arm, to which the inflamed lymphatics could be distinctly traced, but no further: here equally was the boundary of the pain and inflamed surface, and the tension above the elbow-joint was comparatively trifling. The anguish of the hand and arm continued, with such an extreme and peculiar degree of nervous excitement, that narcotics failed entirely to induce the least repose.

On the fourth day, the stage of excitement was more tardy

in its commencement, and more brief in its decline; but no distinct remission was yet enjoyed. The state of the limb was become stationary; but no absolute amendment could be recognized, nor sleep, for more than a few minutes at a time, obtained. After this period, the greatest disposition was evinced in the limb to form depots of matter, which for many days it was apprehended could not be prevented; but the result has hitherto proved otherwise, though at this moment (five weeks from the occurrence of the accident,) there is some reason to fear a formation of pus is taking place at the root of the thumb.*

After the lapse of the first week, amendment, though slow, was progressive: still the constancy and acuteness of the pain continued to banish repose, except for very short periods, and febrile paroxysms were of frequent, but irregular, occurrence, till the twentieth day from the first attack; after which, some natural sleep was enjoyed, the pain in the hand having considerably abated, and the soreness of the axillary gland disappeared. But the hand remained almost void of external sensation, and totally deprived of motion; with the biliary functions suspended, the stomach in the most irritable state, and the bodily powers entirely prostrate. At the present time (five weeks from the occurrence of the accident), though renovation of the animal powers has been effected to a certain degree, yet the functions are much deranged: the hand has but little sensation, and scarcely any motion; the fingers are strongly disposed to contract into the palm, and the hand to approach the fore-arm; pain is never absent, and a considerable degree of œdema distends the hand and fingers.†

Questions, of some importance to decide, here suggest themselves. Is the constitution more susceptible at one period than another to the absorption of morbid poison? or is there a description of virus more active and virulent than others? One, or probably both these facts, will be found of occasional occurrence; as the individual, who in this case so nearly forfeited his life, and has for the present lost the use of his hand, had been for years engaged in morbid examinations, during which wounds and punctures had frequently occurred, without creating the least anxiety or the most trifling inconvenience.

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* At the commencement of the attack, scarifications were freely made in the wounded thumb.

† Upon the inflammatory action in the affected limb declining, gentle friction with the saponaceous liniment was commenced, which was succeeded by a compound of a more stimulating nature, and more subsequently by the strongest volatile applications, alternated with mercurial friction and other deobstruents, assisted by diligent, continued friction, and equal pressure.

ART. V.—*Case of Injury of the Head, followed by Loss of Taste and Smell.* By J. ARNISON, Esq. Surgeon, Alston, Cumberland.

AT a late hour on the night of Wednesday, the 9th of July, 1823, I was called to John Currah, of Ganigill, a man thirty-eight years of age, who had, a few hours previously to my seeing him, received a blow upon his head, by the fall of a piece of stone from the top of the shaft of a copper-mine, wherein he was working, a height of thirty-four yards. The stroke rendered him insensible; but, in a short time, he so far recovered from his insensibility, as to be drawn up to the shaft in the usual manner. I found him delirious, with a high degree of nervous excitement; pulse 72, and full; eyes contracted freely. By introducing my finger within the wound of the scalp, which was between three and four inches in length, I ascertained a fracture and depression near the lower posterior edge of the right parietal bone; he was also sick, and vomiting. I bled him to the amount of eighteen ounces, and put a temporary dressing upon the wound.

On the morning following, the delirium was much increased, pulse 66. At two P.M. I saw him again, in company with two professional gentlemen; the delay being occasioned by their residing at a distance. After a consultation, we agreed to apply the trephine; but our intention was wholly frustrated, the patient's delirium rendering it impossible to keep the head steady for performing the operation with safety.

On the 11th, we considered him a little more favourable, the delirium not being so violent, but still so as to prevent the operation. He continued in this state till the 15th, when he became more settled, rested quietly, and continued to improve slowly; in consequence of which, the use of the trephine was deemed unnecessary. He had been bled frequently, also had taken mercurial and saline cathartics, with diaphoretics. The wound appeared healthy, but was not wholly healed, till a small portion of bone exfoliated, which I removed from the wound on the 24th of October.

Six weeks after the occurrence of the accident, I was greatly surprised to hear he had lost all sense both of taste and smell. The first discovery he made of this was one evening whilst at supper, which he found devoid of taste: to satisfy himself, he took a table-spoonful of mustard, but this was also tasteless. That I might be fully convinced of the truth of his assertions, I requested him to call upon me the first time he came to Alston. I then gave him a glassful of brandy and a glassful of water, a little sugar and a little powdered ginger, of each of which he took a part, but did not feel the slightest taste they had: all were to him alike, except when his mouth was full of brandy,

and his tongue came in contact with the upper part of his mouth, he felt that part a little warmer than when he had water in it; but, if repeated more than once, the brandy and water were both alike. I also gave him liquor of ammonia and assafœtida to smell at: the latter he returned, saying, "I cannot perceive any smell it has;" the ammonia, he said, was the strongest thing he ever felt; "it has made my eyes water, but I do not find any smell it has." He was, whilst labouring under delirium, very much averse to take any of the saline purgatives, which he would retain in his mouth, and, when he thought himself unobserved, would spit it out, even when given to him as water; and from this it may reasonably be concluded, that his sense of taste was at that time quite perfect.

To the present day, all things to him have the same taste, or rather no taste at all; neither does he enjoy that pleasure in satisfying the cravings of his appetite which he used to do: with these exceptions, his health is perfectly good, and he continues his former employment at the copper-mine, belonging to the commissioners and governors of Greenwich Hospital.

Alston, Cumberland; June 30, 1824.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

Relating to the History or the Art of Medicine, and the Collateral Sciences.

Floriferis, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ART. I.—*Case of Chorea.* By JOHN CRAMPTON, M.D. &c. &c. &c. —(Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, Vol. IV.)

THE attention of anatomists and pathologists having been devoted, with considerable success, to most of the disorders with which the cerebral organs are engaged, our knowledge of them is thereby proportionally extended, and the mode of treating them very much improved. Materials for instruction on the subjects of apoplexy and palsy, so far as morbid anatomy can illustrate these diseases, have been amply collected. Even on epilepsy no small share of light has been thrown; but on chorea, which by most medical writers has been considered a disorder of the nervous system, anatomical research, I believe, affords no information.

Practical writers have, however, endeavoured to supply the deficiency, and experience has furnished us with many remedies, as well as with different successful modes of treating this disorder.

In the following case of Chorea, nitrate of silver was given freely, and, whilst the patient took it, she soon recovered her health. The case occurred in an adult, at a time of life when such a disease was little to be expected; but it is not the only instance of chorea to be met with at an advanced age, as Dr. Maton relates the history of a woma, æt. seventy, who was cured of that disorder by musk.*

Case.—Anne M'Kelvey, æt. forty-two, unmarried, of a thin habit of body and pale complexion, was admitted into the Whitworth Hospital House of Industry, on 12th of February, 1821, labouring under a severe paroxysm of chorea; each hand and leg, sometimes one, sometimes all, were affected with a hurried convulsive motion, which appears to a spectator as if she had been beating time to a musical instrument. She speaks in a hurried manner, and expresses great uneasiness when the hand, or limb affected, is held, or attempted to be held: any restraint in this respect gives rise to convulsive motions in some other quarter. The present paroxysm has lasted five days. Bowels constipated; tongue looks unhealthy; pulse weak and slow; no catamenia the last two years.

Previous to September, 1819, had uninterrupted good health; at this time she became affected with hysteria, and was subject to attacks of it until about twelve months since: these consisted first in alternate fits of laughing and crying; afterwards a sensation of globus was experienced in her right side; but it was not until the last four months antecedent to her admission into the hospital, that these fits were exchanged for the motion in the extremities and the head already described. Since that period she has never been eight, seldom four, or even three, days without a return, which continues generally from three to five days, with little or no intermission. She has also, during the last four years, been frequently subject to a dull pain in the right temple: this appears to come on without any connexion in point of time with the convulsive affection. She finds all her symptoms are aggravated when her bowels are costive.

On her admission (12th of February), she was directed to have a fetid enema, after which the paroxysm subsided; also pills, with Rheum; Ext. hyosciami; Pil. hydrargyri; Extr. colocynth. comp. in nearly equal proportions, to be made into pills, of which two were to be taken every night. She was further ordered Argenti nitrat. gr. ¼, ter die.

15th.—No return of chorea. Argenti nitrat. gr. ss. ter die.

16th.—A severe paroxysm, removed by the enema.

19th.—A paroxysm of four hours, removed again by the enema; head-ache. Bol. ex calom. gr. iii.; Jalap, gr. viii.

22d.—Argenti nitrat. gr. i. ter die.

27th.—A severe paroxysm, removed immediately by an enema, with Olei terebinthinæ ʒii.; Tinct. opii ʒi. The enema was retained all night.

March 1st.—Argenti nit. gr. iss. ter die.

6th.—Argenti nit. gr. ii. bis die.

8th.—Baln. tepidum.

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* *Med. Trans. Coll. Phys. Lond.* vol. v. p. 188.

9th.—Severe head-ache. Hirud. viii. tempori dextro. This relieved the pain.

12th.—Argenti nit. gr. ii. ter die.

16th.—Baln. tepidum.

20th.—Omit. argenti nitras. Rep. pil. ut 12 Feb. præscriptæ.

She was now discharged from the hospital, having been an entire month free from a return of the paroxysm, and remanded to the pauper department of the House of Industry.

May, 1822.—She has had no return of chorea; but, whenever there is any interruption to the regularity of the bowel-discharge, she is affected with severe head-ache, and occasionally with slight threatenings of hysteria.

The subject of the foregoing case, previous to her admission into the Whitworth Hospital, had been a resident in the pauper department of the House of Industry, where every attention had been paid to her health, and particularly to the state of her bowels. She took constantly, under the judicious direction of Dr. Orpen, laxative pills combined with fetids, besides other appropriate remedies, to combat a nervous affection of the character described. It is calculated she took above five hundred aperient pills, in varied forms, within the last twelve months; so that, if steady purgation, aided by a well-arranged diet and regular habits, could have subdued her disorder, many advantages for her relief were afforded. The disorder, however, scarcely remitted under any mode of treatment, until her removal to the hospital, and until the nitrate of silver was directed.

The circumstances under which she was placed in the Whitworth Hospital, it is but right to remark, were much more favourable to her recovery than when she was in the pauper department. In the hospital she was in a cheerful airy ward, containing only ten beds; whereas, in the repository for the poor, the apartment which she occupied had seventy beds, and its inmates, for the most part, remained either completely sedentary, or employed only in those kinds of work which require no exercise, and scarcely any muscular exertion.

The caustic nature of the remedy employed in this case, makes us justly careful in giving it inwardly; it has nevertheless been extensively employed in epilepsy and hysteria, as well as in chorea, in these countries, and not, as far as I can learn, with any unpleasant effects resulting from its use. I have known patients, who took it for epilepsy, complain in a few instances of griping pain, but not more than what we often observe from purgatives; and I have never observed such sensations continue for any time. Nor (although I have been particular in my inquiries,) have I heard patients complain of thirst or inward heat of stomach, symptoms which so often follow the employment of other acrid remedies. The change also in the colour of the skin, first described by Dr. Albers,* of Bremen, and afterwards by some of the British practitioners,† has not, as far as I can learn, been often observed in Ireland. My friend, Dr. Brooke, relates an instance where he gave

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* *Med.-Chir. Trans.* vol. vii. p. 284.

† *Ibid.* vol. ix. p. 234.

the remedy in epilepsy with advantage, but where the blue colour of the skin ensued.

Sydenham may be considered as one of the first who described chorea, and who offered any pathology, or proposed any settled mode of treatment. He conceived it was a disease peculiar to the time of puberty; at this period, in both sexes, he states there is a considerable revolution, which induces plethora—in the male from the development of the sexual organs, and in the female from the impending menstrual effort. His mode of treatment was repeated bleedings, to diminish the revolutionary plethora, followed by frequent purging, dry cupping, and blisters to the affected limbs, and finally the cinchona bark and cold bathing.

In the case before us, the followers of Sydenham might say the period of the cessation of the catamenia is equally important with that of puberty in females; that, in this patient, the disappearance of the menstrual discharge was first followed by hysteria, and subsequently the nervous affection was exchanged for another, in many respects resembling it. Sydenham's practice might answer for full women, past forty, ceasing to menstruate, but it was not at all calculated for an emaciated female, as above described, at the period she came under treatment.

Some of the French practitioners,* adopting in part the pathology of Sydenham, apply leeches to the anus and pudenda; following this practice by giving remedies which they suppose act on the nerves, as the vegetable narcotics, bitters, and fetids, besides minerals, as zinc, iron, and copper. This practice is accompanied, as in most other cases, by giving mucilaginous demulcents and ptisans, with a constant use of lavements. In some instances camphor is given in injection, and electuary occasionally applied to the ff ected limbs, besides opiate frictions externally.

Since Dr. Hamilton, of Edinburgh, published his book on Purgatives, the profession has for the most part acted on his views. A steady purgative discipline has certainly, in many instances, succeeded; in some, however, it has been necessary to adopt other measures subsequently.

Dr. Powel† mentions several cases of chorea, treated by him in St. Bartholomew's Hospital with nitrate of silver, in which the doses were pushed to a much greater extent than in the case before us,—so far as even thirteen and fourteen grains in the day.

The arsenical solution has been employed with the same views. Mr. Thomas Martin‡ gave this mineral in a case of chorea, with success; and Mr. Salter,§ of Poole, prescribed it with advantage in a case which had resisted nitrate of silver, as well as most other remedies. Dr. George Gregory|| also gave it at St. George's and St. James's Dispensary. These cases are related in the Medico-Chirurgical Transactions.

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* *Dictionnaire des Sciences Medicales.*
† *Med. Trans. Coll. Phys. Lond.* vol. iv. p. 85.
‡ *Med.-Chir. Trans.* vol. iv. p. 45.
§ *Ibid.* vol. x. p. 218.
|| *Ibid.* vol. xi. p. 299.

A case of chorea, occurring in a woman of seventy, is given by Dr. Maton,* in which the cure was effected by doses of musk continued for a considerable time.

Did chorea consist merely in distension or over-repletion of the vascular system in the brain, and that this state again took its rise from congestion in the liver and other viscera in the abdomen, with a general deficiency of secretion, Dr. Hamilton's purgative plan alone ought to prove more uniformly certain in affording relief. That there is something more than this in chorea, will readily be admitted by those who have witnessed the impression made by other modes of treatment, and especially by those medicines commonly called nervous, or antispasmodic, as in Dr. Maton's case. A peculiar, and often salutary, impression is made by under doses of the narcotic vegetables, such even as in full doses are hurtful. The action of the mineral poisons on the cerebral organs, or nervous system, in chorea, has been illustrated by Dr. Powel's, Mr. Martin's, and Mr. Salter's cases, already referred to. This impression may be effected by the remedy diminishing an excessive animal sensibility, or by a direct abstraction of morbidly increased vital power; and the operation of nitrate of silver may possibly act by some influence analogous to this.

Chorea is not reckoned a fatal disease, (I believe we have no dissections on record of that disorder,) but it frequently gives a great deal of trouble, and undermines the constitution; so that those who have suffered from it readily fall victims to other diseases. Perhaps, as danger is not immediately in view, it does not sufficiently excite the apprehension of parents, and is not consigned sufficiently early to judicious medical treatment.

In confirmation of this, I may be allowed to state that, some years since, three children, of the same family, from eight to eleven years old, whose parents were consumptive, were placed under my care for chorea, which had long baffled domestic and other treatment. By removal to the country, by regular purgation, and by the employment of oxyd of zinc, aided by a suitable diet and exercise, the chorea was removed, and their general health seemed amended. The following winter they had hooping-cough; and, in a peripneumonic attack, which supervened during its progress, two of them were quickly carried off, although so little apprehension was entertained, that the relatives did not send for medical assistance until it was too late. Had suitable medical treatment been resorted to, in the early stages of chorea, with these patients, so that their constitutions should not have suffered by the long continuance of the nervous disorder, they might have resisted the attack of hooping-cough, with better prospects of recovery.

A very severe case of chorea, for which I was consulted, occurred in a boy of ten years old, whom I saw but twice. He had tried purgatives, vomits, tonics, and the other remedies usually ordered, besides other modes of relief suggested by different practitioners in the country. Head-ache was the prominent symptom. I directed leeches to the

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* *Med. Trans. Coll. Phys. Lond.* vol. v. p. 188.

temples, neck, and along the spine, in succession, at the interval of a few days; shaving the head, using the tepid shower-bath, made gradually quite cold. These measures, with a proper attention to the state of the bowels, in the course of a few months restored him to health.

Although certain general principles should guide our practice, yet it would appear that no settled plan, no specific remedies, can apply generally to all cases of chorea we may meet with. Our measures must be varied according to the particular organ, or system, which seems to suffer most. At one time, our views must be directed to the vascular system in the head, also to the state of the liver and digestive organs; again, the condition of the nervous system chiefly claims attention. In other instances, a combined treatment must be adopted, using at the same time both evacuants and nervous medicines.

The influence of change of air, of cold-bathing, of cheerful society, and of exercise, are not to be overlooked: the treatment, in fact, ought to embrace, not only an accurate regulation of the functions of the digestive organs, but an attention to the state of the vascular system in the head, in addition to that of the cerebral or nervous system. But other considerations should likewise claim our notice: the condition of the spinal column, and the system of nerves which emanate from it; also the state of some particular nerves, which may have sustained a degree of local injury, in which instance a judicious local treatment must be combined with general remedies.

But it would extend the limits of this paper too far, were I to enter more fully into the subject of chorea; indeed, it has already exceeded the bounds which were intended: I shall therefore conclude, requesting those who may meet with cases of this malady which end unfavourably, or should its subjects be carried off by other disorders unexpectedly supervening, that they may not fail to make themselves acquainted with the morbid appearances, and communicate the result to the medical world. This will be the first and most necessary step to acquire a more thorough acquaintance with chorea.

CRITICAL ANALYSIS

OF

ENGLISH AND FOREIGN LITERATURE

RELATIVE TO THE VARIOUS BRANCHES OF

Medical Science.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*The Principles of Forensic Medicine systematically arranged, and applied to British Practice.* By JOHN GORDON SMITH, M.D. Lecturer on Political Medicine. Second Edition, greatly enlarged.—8vo. pp. 569. Underwood, London, 1824.

THE first edition of Dr. SMITH's work has been for some time before the public; but we do not regret our not having made it the subject of a review when it appeared, as the present edition embraces a wider range of subjects, and contains a considerably larger collection of illustrative facts and observations. Our delay in noticing the work has not arisen either from a mean opinion of Dr. Smith's labours, or an indifference to the importance of medical jurisprudence, as a branch of professional study and cultivation. Our author has the merit of having, in this country, published the first book which deserves the title of a *System* of Legal Medicine, and we hope, in the course of this article, to satisfy our readers that he has discharged his task in a manner creditable to himself, and highly serviceable to the interests of the public and the profession to which he belongs.

The importance of the application of medical knowledge in aid of the righteous administration of the laws, must be evident to every one who contemplates what is passing around him in this world of crime, accidents, and conflicting interests. Cases daily occur in our own Courts, in which the life, the liberties, the rights, and honour of individuals, depend on medical evidence. This alliance between medicine and justice, while it exalts the dignity of the healing art, not unfrequently calls its professors into situations of great responsibility and difficulty. The high importance, to individuals and society, of the interests involved in the exercise of this duty, are, we should think, sufficient inducements to a cultivation of this part of medicine, without our urging, on the medical practitioner, as an additional motive, that his own reputation and fortune may be materially affected by the manner in which he acquits himself on such trying occasions.

It is painful to admit, but it cannot be denied that the records of forensic medicine contain too many examples where medical testimony, instead of clearing doubts, removing obscurities, and furthering the ends of justice, has involved the case in greater perplexity, and tended either to paralyze the arm of the law, or to direct it to an innocent victim. The attention which has lately begun to be paid in this country to the subject, and the appearance of the present publication, and its successor, the comprehensive work of Dr. Paris, will, we trust, make these mortifying exhibitions among the members of our profession less frequent, by making them familiar with the questions which most frequently call them into courts of justice.

We shall now proceed to lay before our readers the general plan of Dr. Smith's work, and such a view of its contents as our limits will permit. A book nearly extending to six hundred pages, embracing such a variety of subjects, and these treated with as much conciseness as is consistent with perspicuity, does not admit of a copious and regular analysis. We shall, therefore, content ourselves with touching on those divisions which involve the most important questions which a medical man may be required to solve, in his medico-judicial capacity; and this we can, in most instances, do in a general way only, leaving our readers to consult the original for the fuller and more satisfactory details.

The principle of arrangement adopted by Dr. Smith is confessedly not scientific: all classifications hitherto founded on this principle are both imperfect in themselves, and inconvenient in their application to study, reference, and practice;—objects which ought chiefly to be aimed at in forming a classification.

The different questions are arranged under four classes, and these again are divided into sections, chapters, and minor subdivisions.

I. The first class embraces the extinction of life under every variety of circumstance that may render that event the subject of justiciary investigation.

II. Injuries inflicted on the person, not necessarily involving the event of death.

III. Disqualifications, of a physical nature, for the discharge of civil offices, or the exercise of social functions.

IV. Questions of a mixed or miscellaneous kind.

The death of an individual may become the subject of investigation in a court of justice from various causes. That event may take place suddenly, without question of criminal agency, or it may be attended with circumstances calculated to excite suspicions of its being the result of violence inflicted, either by accident, by another person, or by the hand of the

deceased himself. These are by far the most important questions relating to medical jurisprudence, and those which most frequently require medical testimony for their elucidation. On this account they occupy the first place in our author's arrangement, and are treated of in the following order:—1. Death in the healthy state. 2. Death where there is question of extrinsic personal agency, or *homicide.* 3. Death where there is question of spontaneous personal agency, or *suicide.* 4. Death of the unborn and newly born, or *prolicide.*

Death in the healthy state.—The title of this section is certainly a misnomer, since the majority of the deaths to which it refers result from the fatal progress of diseases, and those of long standing, though their existence may not have been indicated by manifest signs of deviation from the healthy state. The author seems to have been sensible that the title was objectionable, from the explanation which he gives at the outset, that it necessarily implies sudden death, and relates to death occurring without the usual precursory symptoms of that event. *Sudden death*, therefore, would perhaps be more appropriate and correct.

As the reality of a person's death may become matter of forensic inquiry in various ways, the consideration of this important division of the subject is very properly prefaced by a chapter on *apparent* and *real death.*

Marked as is the difference, in general, between the living body and the cold unconscious mass which remains after the vital spark has fled, instances occasionally do happen where life exists, and yet the manifestations of vitality are either suspended for a time, or so obscure as not to be discernible by superficial observers. Cases, also, of real death occur, in which many of the phenomena which usually characterize that state are wanting. Either of these conditions may give rise to investigation and discussion in a court of justice. Many histories are recorded and related of the mere semblance of death having been mistaken for the reality, and fearful consequences are represented as having necessarily ensued; such as, abandoning a patient to his fate when, with care and appropriate remedies, there existed a chance of his recovering; the precipitate application of the scalpel, either for the purpose of anatomical dissection or pathological researches; and, lastly, the interment of a person yet alive. The majority of these histories, however, are to be considered rather as fables than facts, and have had their origin in superstition, credulity, or malice; but, as there is reason to believe that some of them are well founded, (a few of the most authenticated of which are given by the author,) and as the rights to property sometimes depend on the reality of a person's death, and even on the moment at which it may have taken

place, medical writers have been at some pains to put us in possession of the means of distinguishing between apparent and real death.

The phenomena usually described as characterizing death are want of voluntary and involuntary motions, insensibility to stimuli, coldness, paleness, fixed state of the eye, contraction of the features, rigidity of the limbs, and relaxation of the sphincter muscles. These different tests are discussed in succession by the author, and the sentiments of various writers as to their validity are given; from which it appears that, if we are to be guided by authorities, none of them can be considered satisfactory proofs; as one or more of them may be wanting in real death, and may exist in subjects who are only apparently dead, and capable of resuscitation. The characteristics most insisted on are the cessation of the vital functions, respiration and circulation, the fixed and collapsed state of the eye, and the rigidity of the limbs. Dr. Paris remarks that respiration, however slow and feeble it may become by disease, must always be perceptible, provided the breast and belly be exposed, when the elevation of the ribs and sternum, and the swelling of the abdomen, can never escape the attentive eye; while our author, on the other hand, quotes Nystens' observation, that the ribs are not raised when respiration is very languid,—that the diaphragm only acts, and that the feebleness of its contractions may be so great as to exhibit no sensible motion in the abdominal parietes.

Louis regards the appearance of the eyes, and the stiffness that occurs after death, as the most evident and decisive proofs of death. Besides the loss of their brilliancy, and the appearance of a glairy membrane, the eyes of the dead, he observes, collapse and grow soft in a few hours,—an alteration which no change in the living body is capable of producing; and he further insists that, as long as the globe of the eye maintains its natural firmness, the person is not dead, whatever other marks may induce us to think so. Desgranges, on the contrary, asserts that the collapse of the eye, and also the glairy membrane, have been observed in persons in a state of asphyxia from various causes, and who have recovered.

The stiffness which belongs to real death must be distinguished from that which may be present in apparent death from cold and convulsions. According to Louis, and others who insist much on the validity of this symptom, in nervous diseases, when the limbs become stiff, the rigidity uniformly precedes the state of apparent death; whereas the stiffness of the corpse does not come on for a longer or shorter period after dissolution. It is also observed that, when the stiffness arises from convulsions, one set of muscles only is contracted, the antagonist muscles being in a state of inaction or relaxation; whereas, in the dead

body, muscles producing contrary actions are all in the same condition.

The application of various stimulants, both as tests and means of resuscitation, should never be omitted in doubtful cases, though, as means of discrimination, they are not to be considered decisive. Some have proposed galvanism as a test, regarding insensibility as proof positive of death, and *vice versa;* but, when we recollect that the most violent motions have been excited, by this powerful agent, in subjects who had suffered decapitation, surely little reliance can be placed on it as a test.

The last resource, in all these nvestigations, is the supervention of the putrefactive process, which must put an end to all doubts. The characters already enumerated, however, if properly attended to, will, we should think, enable the practitioner to form a correct opinion; and, where the history of the case, or the appearances presented by the body, leave any doubt on his mind, no appropriate remedies or means of resuscitation are to be omitted before the body is consigned, either to the dissecting knife or the grave.

The states of the living body that are most apt to resemble death, are *asphyxia* from various causes, *syncope*, *apoplexy*, *catalepsy*, *hysteria*, *hypochondriasis*, and indeed exhaustion from any protracted or violent disease. The practitioner who inquires attentively into the history of these cases, and brings a competent knowledge of his profession to their investigation, can be at no loss how to decide and act.

Having discussed the subject of apparent and real death, and the practical application of it to forensic medicine, our author proceeds to the consideration of *sudden death, without suspicion of criminal agency.*

When a person, who was known to have been previously in good or apparently good health, has died suddenly, or is found dead under circumstances of a mysterious or suspicious nature, an examination of the body by a medical practitioner may be required, either for the sake of information and the satisfaction of surviving friends, or at the instance of public justice.

Cases of this description are considered under two heads:—1. Where death occurs from internal causes; and 2. Those in which external, but natural, influences are concerned. To the former head belong several diseases, which may either invade suddenly and prove speedily fatal, or, having existed in an obscure and unsuspected state, for a longer or shorter time, come at once to a fatal termination. Diseases of this nature are generally such as affect one or other of the functions necessary to life,—respiration, circulation, and the nervous energy; such as apoplexy, epilepsy, aneurism of the heart and aorta, or

ossification in these organs; rupture of the heart, &c. In some acute diseases, whose first effects are followed by others of a protracted character, sudden and unexpected death not unfrequently occurs,—as phthisis, pleurisy, hepatitis, &c. Inflammation of important organs, either originally situated there, or suddenly transferred to them, as in gouty and rheumatic subjects, and violent emotions of the mind, are also known to occasion sudden death.

The external agents, unconnected with crime, which may occasion death, are lightning,—exposure to noxious gases, to cold and hunger,—the immoderate use of spirituous liquors,—the imprudent swallowing of cold water,—and spontaneous combustion.

After considering each of these different causes in order, and detailing the manner in which they appear to operate on the animal economy in extinguishing life, the author goes on to enumerate the points of duty that devolve on the practitioner, in any sort of investigation that such cases may give rise to.

Inquiries into the manner in which casualties of the foregoing kind have been caused, are conducted by the coroner, an officer appointed by the crown, and a jury summoned by him for the occasion. Before this inquest, all persons who have any knowledge of the matter are summoned, and examined on oath; and it is usual to have recourse to professional testimonies, and, if there be any obscurity about the case, this testimony may be the sole important one. So many interests being involved in the manner, as well as the matter, of his evidence, the researches of the practitioner must be conducted with such care, diligence, and minuteness, as not only to enable him to draw his own conclusions, but also to satisfy others that the grounds of his opinion are correct; and thus leave no room for doubt, cavil, or censure. The following rules to be observed on entering on the duty in question are so judicious, and at the same time so forcibly stated, and so pertinently applied to cases of an intricate and difficult nature, that we will quote the author at some length:

"When, therefore, we are called upon to aid the researches of authority in a case where a person is found lying dead, and no one is forthcoming to give any information on the subject, the following is an outline of what we ought to do:

"It is a rule, under such circumstances, which should universally be observed, that, if the body cannot conveniently remain where found, until an inquest can be assembled, an accurate examination should be made into every appearance connected with it on discovery. It will be of importance to the medical practitioner to know the spot of ground, the situation of the objects, and the posture of the body when found. He must carefully examine the whole surface of the corpse,—not merely

to discover wounds or bruises, but also to detect any improper tightness, pressure, or other impediment to free circulation. If there are wounds, they must be carefully traced, and the anatomical relation of the parts in which they are found is to be taken into consideration: if there are bruises, or any marks of violence whatever, the parts beneath must be dissected. These things being premised, whether we have yet discovered any presumptive cause of death or not, we are to proceed to examine the cavities of the body. It is not very material, perhaps, with which we begin; but, in such important cases, we should never be satisfied with the morbid appearances found in one only, however conclusive these may appear. The circumstance of having rested there, and the consequent necessity of admitting the possibility that, by further search, other phenomena, indicating fatal disorder, might have been discovered, may mar the whole process, and subject us to censure. Such neglect has not unfrequently occasioned much perplexity." (Pp. 47, 48.)

The appearances presented on opening the head, which denote death from apoplexy or epilepsy, need not detain us, as these are familiar to every experienced and well-informed practitioner; but the case may be complicated with other circumstances, which demand our earnest attention and discrimination.

"A person, for instance, may be carried off by apoplexy, under circumstances calculated to excite suspicion, either as to the conduct of the deceased himself or that of others, and to throw a mystery over the event, which a judicious examination may entirely remove. For instance, the usual turgidity and discoloration about the countenance may be wanting, while wounds and bruises appear in various parts of the body; and all this, upon careful investigation, may admit of easy and natural explanation. A man may be overtaken with an apoplectic paroxysm in a place where there are hard or sharp objects, upon which he falls, as against furniture in a room, or among stones out of doors: he may thus receive wounds that will appear extensive, and may even lose a considerable quantity of blood. This would be ample cause for popular alarm and clamour, by which the man of science never ought to be swayed. On dissection, the real cause of death will appear, which, along with the extent and nature of the wounds, will show that death has not been produced by external violence. A still more complicated event, however, may occur. It is possible that a person in the apoplectic state may fall, alive, into water, and be taken out dead. In such a case we may expect that the signs of apoplexy will be manifest; and circumstantial considerations must have weight,—such as the nature of the place in which the deceased is found; the appearance of the ground on the margin of the water; the previous state of his mind, health, and general circumstances; as also the degree in which the phenomena of death by submersion exist; of which mention will be made in the proper place.

"Let us suppose another case,—one that, perhaps, may never occur, but which, however extreme, is still possible. A person may fall from a height in a fit of apoplexy, or in any other paroxysm that deprives

him of the perception of danger, and of the power of avoiding it. In consequence of this, his skull is fractured, and he is found dead. It can hardly be supposed that the manner in which the fracture has been inflicted, can remain a mystery; it will be seen, from the situation of the body relative to surrounding objects, that this has happened by a fall: but three questions may arise. Has the deceased accidentally come by his death in this way? Or has he sought it of his own accord? Or has he been precipitated by the agency of other persons? Between the question of mere accident and that of suicide, other persons may, perhaps, be as able to decide as ourselves; for dissection may discover nothing but the fractured skull and its consequences. Previous history must here be considered; but it may be that, on opening the cranium, evident marks of apoplexy are found; and further inquiry may lead to the conclusion, that the deceased was seized with a paroxysm of this disorder in a dangerous situation, by which he received the fall in question." (Pp. 49, 50.)

The majority of instantaneous deaths arise from affections of the head and its large vessels, and the examination of those organs ought to be carried on with great care and nicety; nor must we forget that dangerous and fatal diseases of internal organs, not previously suspected, or overlooked at the moment, may be going on at the time an injury is received; as happened in the case which gave rise to the celebrated Oldham inquest. When these are detected, we have to determine how far the catastrophe was affected or hastened by the injuries inflicted. In examining the alimentary canal, we must bear in mind that we may meet with alterations which may arise from previous disease, the action of deleterious ingesta, or which may have occurred subsequent to the event under investigation.

With regard to death by *lightning*, Dr. Smith observes, that morbid anatomy, without any knowledge or suspicion as to the agency of electricity, will serve us little in the investigation. Few dissections of those who have perished in this manner have been made; and, except the scorching on the surface, and the discoloration said to be particularly observable in the direction of the spine, all the appearances described have been found in the bodies of those who have died from other causes. Death by lightning has been said to take place *qua* suffocation. Mr. Brodie, from opening the bodies of animals killed by electricity, concludes that death takes place in the same manner as from a severe injury of the head.

The case of death from *noxious gases* may be involved in difficulties of various kinds, which are ably stated by the author.

"We may readily suppose that carbonic acid gas may have been inhaled to a fatal extent; yet, when the body is found, the circumstances as to noxious influence may be altogether changed. For instance, a person goes into a cellar, and has occasion to stoop, in order to accom-

plish the purpose for which he entered. The accumulated gas, which is specifically heavier than the air of the atmosphere, is at the time high enough to deprive him of sensibility, and, falling still lower among it, he perishes. Some time elapses before he is discovered, while the gas, having found an outlet at the open door, has escaped; and a burning object will then be supported at the very lowest part of the place. In such circumstances, perhaps, there will be evidence enough of what has occurred, from the state in which objects are found. The process by which the evolution of so much gas had been produced, may be found going on: the previous closeness of the door may be attended to,—the length of time during which it had been unopened may be recollected, and the whole event be satisfactorily explained. But we may find persons killed by this gas, under circumstances of a more doubtful nature. The eyes of such as die in this manner are generally found wide open and, as some say, protruded from the sockets. The tongue is commonly thrust out, and that at one side of the mouth; the jaw at the same time clenched, and the face livid. We may not find marks of violence, unless where there has been a fall from a height; and then the nature of the external injury will explain itself, in connexion with the other circumstances.

"On opening the body, we shall find the proximate phenomena, if I may so express myself, of suffocation. What is meant by these will be discussed hereafter. I shall merely remark now, that there will be a congestion of blood in the right side of the heart, and in the veins leading into those cavities. Where this exists, and no other cause of suffocation is demonstrable, such as drowning, strangling, or morbid impediment, we have proof enough, when added to the history of the event, to decide in what way a person in such circumstances has been carried off." (P. 54—56.)

In mortalities from *hunger*, we shall not only find emaciation and emptiness in the stomach and intestines, but very scanty remains of blood in the vessels; which, with the previous history of the circumstances of the deceased, together with the absence of other morbid appearances, will point out the cause of death.

Death from exposure to *cold*, in inclement seasons, frequently occurs in this country, and becomes a subject of investigation before the coroner; but our author is not able to produce any thing satisfactory as to the appearances presented in such cases. We shall generally find that the subjects of such casualties were in circumstances of want and misery, or may have themselves contributed to their fatal end by excessive drinking; or, at least, such indulgence as has rendered them unable to resist the fatal influence of the exposure.

Death from a sudden draught of *cold water*, when the body is in a state of great excitement from violent exertion, may take place either instantaneously, or in consequence of disease induced. The former consequence is ascribed to a powerful sedative impression made on the nervous system, through the

medium of the stomach; and, from the rapidity of the fatal action, it is supposed that no corresponding lesion can be expected to be found in the dead body. In these cases, we must depend on the evidence derived from the history of the circumstances, and the absence of marks indicating any other cause of death.

In cases where death is presumed to take place from *intoxication*, we look for apoplectic symptoms; but sudden death may take place from large potations, without leaving any perceivable trace of internal derangement. In all these cases, we may expect to meet with the presence of the liquor in the stomach and intestines.

The last subject noticed under this division of the work, is the *spontaneous combustion of the human body*. The fact itself has, in this country at least, been generally disputed; but our author thinks the cases recorded of such occurrences so respectably attested, that it can no longer be doubted. Instances are mentioned where persons were accused and condemned on a charge of murder, in consequence of bodies having been found consumed in this manner; and, as the occurrence might be urged as a defence in cases where attempts have been made to burn a body after murder, in order to destroy all evidence of crime, and thus the question might become the subject of judicial discussion, our author details the phenomena alleged to attend it, and distinguish it from ordinary burning. He also gives a brief notice of the best authenticated cases on record, and refers to others.

The questions arising out of cases in which the extinction of life in one person is effected by the agency of another, are by far the most frequent causes of our appearance in a court of justice, and are those in which the most serious consequences depend on our mode of exercising the duties that are required of us in such situations. This section embraces the important subjects of *poisoning*, *suffocation*, and *wounds and bruises*, or injuries analogous to them.

Dr. Percival remarks that, on such occasions, the medical practitioner should be qualified to give his testimony consonant to legal, as well as medical, knowledge; that he must not only be acquainted with the signs of natural death, as well as those which occur when it is produced by accident or violence; but that *he should not be a stranger to the several distinctions of homicide established in our courts of judicature.* Now the latter qualification here required of the medical witness, we do not consider at all essential, notwithstanding the high authority quoted, and the sanction which our author seems to give to the opinion, by detailing, both in the text and more at large in the Appendix, the several distinctions in question. The duty of

the practitioner is simply to ascertain the manner and cause of death; and we do not see how the investigation of these facts can be influenced by a knowledge of the degree of culpability attached, by the law, to the act which occasioned it.

The only qualifications necessary to the practitioner for the proper performance of such a duty, are a thorough knowledge of his profession, and the exercise of a sound judgment. On entering upon it, he ought, as much as possible, to divest himself of any impressions he may have received from rumour or popular clamour; bearing in mind that the fatal event which he is about to investigate may turn out to be the result of accident or natural causes, and not the consequence of criminal agency. Should his researches lead him to conclude that life has actually been destroyed by unfair means, he may encounter some of the following questions:

"Are there no fatal diseases that leave appearances similar to those found in the body on the present occasion? Could the person have inflicted this injury on himself? Has not a fatal result taken place in this instance, from a cause that in another person would have been of little or no consequence? Was every thing done for the recovery of the deceased? Or, might he not have recovered, had proper treatment been pursued? And in certain cases, as hanging and drowning, it has been matter of inquiry, whether the person was killed in the manner alleged, or first deprived of life, and then placed in that situation in order to baffle suspicion? All these, and other questions of equal importance, have been repeatedly put to professional witnesses." (P. 63.)

The subject of *poisoning* receives from our author the ample consideration which its importance in medico-legal investigation necessarily claims. Articles which possess this fatal quality may be administered with a criminal intention on the part of others, or resorted to by wretched individuals to take away their own lives. They are also frequently mistaken for substances of an innocent or useful nature, employed in food or medicine; and sometimes persons are exposed to their deleterious influence from these articles being employed in the arts, or entering into the fabrication of utensils.

Poisons differ from each other in their physical and chemical characters, as well as in the effects which they exert on the living organized system; and these differences constitute the basis of the two most common arrangements, or classifications, adopted by systematic writers,—that which is founded on the basis of natural history, and that which classes them according to their effects. Dr. Smith avails himself of both these principles of arrangement, discussing the poisons belonging to the mineral, vegetable, and animal kingdoms, in the order of their active relations, as *corrosive* or *escharotic*, *astringent*, *acrid*, *narcotic* or *stupifying*, *narcotico-acrid*, and *septic* or *putrifying*,

Before entering on the particular examination of the individual poisons, the author gives a brief sketch of the symptoms which characterize the action excited by each of the above classes on the living system, and the morbid lesions resulting from them, and discernable on dissection after death; concluding with some useful rules, which are generally applicable, for the guidance of the practitioner, when called upon in emergencies of this kind.

"In the investigations which it may be our duty to perform, we may have to do either with the living or the dead body. In those cases to which we may be called during the life of a person who has taken poison, the primary object of the practitioner must, of course, be to save his patient, and remove suffering; and, though successful in both of these indications, it may not be the less necessary to institute a judicial inquiry into the facts connected with the case. As it must, therefore, be of the utmost importance to know what particular poison was administered, it is incumbent on the practitioner to be careful, in his endeavours to save life, not to destroy the means of verifying or disproving an imputation of guilt.

"One rule to be invariably observed when we are called to a case of poisoning, is to ascertain, if possible, what the individual last swallowed, to get possession of the utensil in which it has been contained, and of the remains, if there be any. If the person has vomited, it is of equal importance to secure the rejected contents of the stomach.

"If we are called while the sufferer is yet alive, we must also observe the symptoms; and a corroborative proof, as to the particular deleterious article administered, is to be obtained from the successful application of an established antidote.

* * *

"Having obtained a portion of the substance in which the poison has been mingled, or of the matter vomited, we may submit a part to such tests as can be most readily procured; the immediate result of which may assist us in our decision as to the proper practice for recovery. In order to speak to the purpose, however, in a court of justice, the mass should be reserved for deliberate experiment, when we have the means of insuring accuracy.

"It has been recommended to give part of the suspected substance to an animal, and much stress has been laid, and a good deal of discussion employed, upon this point. I shall content myself with saying, that the loss of time, and probably of material for more accurate investigation, would generally be great and evident objections; the rather, as we cannot, by this experiment, propose to identify the individual poison.

* * *

"In every case of suspected poisoning, where the history is unsatisfactory, it will be of considerable importance to inquire into the patient's habits of life, peculiarities of constitution, and liability to complaints, as well as the nature of these; whether he is known to have been formerly affected in a similar manner; whether particular articles of food, generally considered wholesome, used to disagree with him; of what his

last meal consisted; and whether any mistake, or deleterious interference, could have occurred in the culinary department.

"These injunctions are palpably necessary where the person is yet alive, and the great object is recovery; but they should also be attended to where death has taken place. The only object we have then in view is the detection of the poison; and, being masters of time, and having it in our power to carry investigation much further, and to pursue it more deliberately than during life, we must be careful to throw no obstacles in the way of a full elucidation of the question, by hurry or impropriety in our mode of proceeding.

"We are to seek the cause of death, also by negative as well as positive proofs. By these I mean the absence of all other signs of injury or derangement, whether from violence or disease, that might be urged as the cause of death. The presence of the fatal substance, and the known or presumed effects of such substance on the system, form what may be termed positive proofs.

"In searching, post mortem, for the presence and traces of poisonous ingesta in the internal parts of the body, the following rule of procedure will be applicable in all cases. The whole canal for alimentary functions should be examined, from that part of it which is appropriated to deglutition to the ejecting extremity; laying open the fauces and œsophagus, and examining the large intestines as well as the small.

"We are not to be deterred from this examination, merely because there may have been an inconvenient lapse of time between the death of the individual and the period of investigation. It was formerly believed that, after a few days, any researches in the body would be useless, and even dangerous. With regard to the danger, it may be observed, that much is placed to this account that belongs merely to disgust; and, as to our being baffled in the search, if it be rightly conducted, the detection of mineral poisons, at least, cannot be affected by the approach of putrefaction." (P. 76—79.)

The mineral kingdom supplies by far the greatest proportion of the poisonous articles which are either intentionally administered or accidentally taken; and under this division are included *metals* in the states of oxides and salts, *acids*, *alkalies*, *earths*, and the combinations among them usually denominated *salts*, or *neutral salts*. It comprehends most of the corrosive poisons, all the astringent, and some of the acrid.

The author begins with the metals which, in certain states of combination, become deleterious to human life; and *arsenic* naturally heads the list, followed by *mercury*, *copper*, *silver*, *antimony*, *zinc*, and *lead*.

Each of these is treated of, first, as an object of natural and chemical history: its specific action on the constitution, whether administered as medicine or poison, is then considered,—its established antidotes,—the morbid appearances observed on dissection, when death is the result,—and the most certain and approved tests by which it is recognized, with other circum-

stances, of a collateral nature, which may aid us in our investigation; lastly, the practical application of the knowledge we possess on these points is laid down.

The consideration of the individual poisons under these several aspects is necessarily so extensive, that we cannot, in the short space allowed us, attempt to follow the author, without swelling this article to an undue size, or presenting our readers with only a meagre and unsatisfactory detail of a portion of the work, replete with information of the first importance to the medical practitioner.

[To be continued.]

DIVISION II.

FOREIGN.

ART. II.—*Consultations et Observations de Medicine, de feu* CH. L. DUMAS, &c. &c. Publiée par le Dr. ROUZET, Membre adjoint de l'Academie Royale de Medecine; Medecin de la Mounoir Royale des Medailles, &c. &c.—pp. 498. Paris: chez Gabon et Compagnie. 1824.

Consultations and Cases in Medicine, by the late CH. L. DUMAS, &c.

PERHAPS a more useful bequest could not be left by an eminent medical practitioner to the profession in general, than a work which should contain a candid account of the errors into which he had fallen during the course of his practice, and an undisguised history of those cases in which he had been unsuccessful, either from the nature of the case itself, or from having formed an erroneous diagnostic. Such a publication could only be a posthumous one, since it is not to be expected that any man, in his life-time, continuing to practise his profession, the basis of his reputation being founded upon public opinion, could venture to record his mistakes.

The work before us is a posthumous one, but it is sadly deficient in two points. In the first place, the consultations are not followed, excepting in two or three instances, by any subsequent account of the progress of the cure; and the cases are almost all fortunate in their termination, bearing, therefore, the marks of having been selected from a large number; and that very selection being, as we have hinted above, prejudicial to the progress of science. Although by no means inclined to think well of the state of medical practice in France, we are induced to give some account of this volume, because the diseases of which it treats are principally chronic, a class of maladies to which M. DUMAS had paid particular attention, and in which the minute care bestowed upon diet and regimen, as well as the employment of

those obsolete and old-fashioned remedies still in vogue amongst them, are occasionally crowned with a success which would not at first sight be expected, or believed, by those accustomed to the more energetic prescriptions of English practitioners; and which, in the treatment of the acute forms of disease, renders us so much superior to our continental neighbours.

Dr. Rouzet, the editor of this volume, informs us, in a short preface, that these cases were destined to form part of a clinical work, which M. Dumas intended to publish, as an illustration of his general doctrine of chronic diseases. He also meant to have accompanied these cases with remarks on the principles which they were intended to establish. With regard to the Consultations, which indeed constitute two-thirds of the work, we are informed that they are extracted from two select Books of Consultations, from whence he proposed to have drawn the materials for his clinical work, the greater part of these consultations having been crowned with complete success. We can only repeat, that we should not regret giving up half the fortunate cases for the sake of those which terminated fatally.

In making our selection from this volume, we shall pass by those cases and consultations in which we conceive our author to have erred in principle, and consequently in practice; but dwell more at large upon those points which, however minute, we conceive are occasionally too much disregarded by practitioners on this side the Channel.

The first consultation which we shall translate is the seventh in the volume, and is entitled "Weakness of the Brain, and of the Organs of Generation." The subject of this Memoir had been addicted to the practice of masturbation from the age of fifteen, and which, together with hard study and inquietude of mind, had produced a greater effect on a temperament disposed to melancholy. Impaired digestion, weakness at the chest, irritability, and rheumatic pains, were the most obvious symptoms. At the age of twenty-two, the patient had the venereal disease, to which the pains in the limbs are attributed, but generally he was improved in health, although living in the midst of agitation and fatigue, both of body and mind. The complaints for which he applied for advice are—first, a strong propensity to sleep, principally felt after his meals; and which our author decides to be owing to the state of the stomach and intestines, rather than to that of the brain itself: the second complaint refers to the parts of generation, which are so enfeebled as to be useless. M. Dumas considers this to be a branch of the same nervous weakness which appears to have affected the brain and the viscera of the abdomen, and, as depending upon the same principle, requiring to be combated by the same means. Besides this, he is of opinion that some particular

vice of the semen itself renders its ejection premature; and this alteration he conceives to be derived from the vitiated condition of the digestive organs, by which its constituent principles are elaborated. To remedy these defects, the following plan is pointed out:—

1. The patient's nourishment to be mild, full of gelatinous and nutritive matter, and especially that which contains the greatest quantity of nourishment in the least space; and, after an enumeration of various dietetic articles, hartshorn-jelly is recommended, both as food and medicine. He is recommended water and a mixture of old and dry wines as drink, but to be taken cold, even of the temperature of ice; and he is to abstain from fermented and spirituous liquors. He must go to bed, and rise early. With respect to exercise, he is to be moderate; that on foot is preferred to horse-exercise. He must avoid much labour of the mind, and every thing that stimulates the imagination. Without exciting useless desire, he may, however, be permitted to make an essay of his powers occasionally; and add to the regimen above mentioned the following curative means:—1st. A cold bath every morning, followed by a sufficient quantity of exercise to produce a gentle moisture of the skin. In the evening, when the tendency to sleep comes on, he will cause cold water or ice to be applied to the head; the neck and spinal column is to be rubbed with brandy, mixed with some volatile alkali; and the limbs are to be rubbed, morning and evening, either with a flannel or brush,—particularly the abdomen, loins, and the neighbourhood of the genital organs; to which latter he will apply ice every day, and wash them with a solution of white vitriol and alum in water, with some tincture of cantharides added to it, (the proportion mentioned is only fifteen or twenty drops,) to the quantity necessary.—2d. At each meal, the patient is to swallow, with the first spoonful of soup, one grain of ipecacuanha in powder; and, after the meal, a spoonful of the elixir of Hoffman.—3d. He will vary the use of stomachics and tonics,—such as cascarilla, chamomile, &c.; together with mineral waters containing steel,—such as those of Lamalon and the neighbourhood of Uzes.—4th. Every morning and evening, the patient will take the quantity of a nut of a confection, the principal ingredients of which are bark, aloes, saffron of Mars, and powder of arnica; and this prescription may also be made into tablettes, so that he may take some of them in the course of the day.—Finally. The utility of all these remedies may be further promoted by the application of a plaster to the perineum, composed of turpentine, white vitriol, and terra sigillata. Asses' milk is hinted at as likely also to be serviceable in the progress of the cure.

Such is an abridged outline of the treatment proposed in this case; and we have the authority of the editor for the successful result of its application, since he informs us that he found notes to that effect among the papers of M. Dumas.

We shall offer but few remarks upon this case: indeed, we must leave that task to our readers, as the space we can devote

to the work will not permit of our doing so; and proceed to notice the next Consultation, which appears to us to afford some points of interest. We may, however, observe, that the principles upon which M. Dumas proceeded in the treatment of the above disease were radically good, though some of his remedies were puerile, and others of very doubtful efficacy. With regard to the effects produced upon the constitution by the practice of masturbation, two very opposite opinions have been maintained by writers of nearly the same period. TISSOT drew a most frightful and overcharged picture of the ill consequences attending it; whilst JOHN HUNTER treated it as a practice, physically speaking, attended with no particularly alarming results. The truth certainly lies between these extremes: if the habit is broken early in life, there can be no doubt that the constitution will finally triumph over the symptoms of debility which it always induces; and that, in the lapse of time, and with proper management, the sexual organs will recover their tone and efficiency; but it is no less true that, in strumous habits, the foundation of many a fatal disease is laid by a perseverance in this degrading custom, and that consumption, especially, is too often the result.

The 16th Consultation is a case of *laryngeal phthisis*, the consequence of repeated catarrhal affections, probably aggravated by the closure of a fistulous ulcer, which the patient (a young lady) had been affected with in the chest; and this M. Dumas considers the more likely, as the constitution is lymphatic, approaching to scrofulous. The symptoms mentioned are—alteration of the voice, a fixed pain in the throat, a pain in deglutition, an impression of heat felt at the bottom of the larynx, and an expectoration of a suspicious matter; and these combined lead the author to conclude that the larynx and trachea are alone affected, and that the lungs are still sound. But the diminution of strength, the emaciation, and continued fever, announce the progress of the disease, which appears to have reached its second stage; the difficulty of swallowing tends to the belief that the mucous membrane of the trachea and larynx is diseased, and that there are points of ulceration established in this part.

The three indications to be observed in the cure of this disease are—to calm the irritation of the throat, to turn aside the fluxion, and to prevent the formation of lymphatic congestion and ulceration. To fulfil these intentions, the patient is directed to use, for a common drink, a strong decoction of coltsfoot mixed with gum arabic; and to take every morning a broth, which bears a close resemblance to mock asses' milk, and which is afterwards to be substituted for it. Before this treatment is commenced, the patient is to be purged with an infusion of rhubarb, manna, and cream of tartar; and this to be repeated every fortnight:

this is meant as a revulsive remedy. She is also to use injections composed of decoction of chamomile mixed with a little soap, and made still more irritating by the addition of some sal ammoniac; for the same purpose, a pediluvium is also to be employed, some salt and mustard being added to the water. Pastilles of the leaves of aconite in powder, half a grain in each, are to be swallowed every three hours. To calm the cough, and to allay the irritation of the throat, several anodyne remedies are recommended to be taken at night,—either poppy infusion, the juice of lettuces, or opium. Fumigations of amber and mastic are also to be used to the throat; as well as the vapour of pectoral and detersive plants, and more especially the inspiration of sulphuric ether, in which some leaves of cicuta are digested. Three or four leeches are directed to be applied to the painful part of the throat; to be followed by a blister, which is only to remain long enough to irritate the skin. The situation of the blister is to be frequently changed from the neck to between the shoulders, then to the chest, and finally to the inner part of the thighs. If any appearance of pain, swelling, or inflammation about the parotid glands, should come on, M. Dumas recommends suppuration to be encouraged; or, should there be a wound in any part of the body, he advises it to be carefully kept open; and the lymphatic temperament of the patient makes it necessary to mingle the above treatment with the exhibition of tartarised salts, antimonials, balsamics, and tonics,—even the cascarilla and cinchona. The diet is to be that which comprises much nourishment in a small space.

This case may give rise to many reflections; and there may be good reason to believe that some of the remedies recommended by our author are now too much neglected. The plan of inhaling the vapours of medicinal substances once was in great vogue, and, if we may believe our countryman, BENNETT, the author of a paper in the "Memoirs of the French Academy of Surgery," and others, it was occasionally productive of much good. Lately, Sir A. CRICHTON has revived the practice in favour of tar; and, though his praises of its good effects may be considered as overcharged, yet, in certain instances, no doubt can be entertained of its having been followed by successful results. The cases in which this practice appears available, are those in which the larynx and trachea alone are affected: nor does it appear probable that the serious affections of the lungs themselves can be influenced by such means. The paper in the fifth volume of the "Memoirs of the French Academy of Surgery," deserves to be consulted with reference to this practice.

We now pass over several Consultations, and stop at the 40th, a *case of epilepsy from worms.* M. Dumas forms this diagnosis from the circumstance of several individuals of the family having been thus affected. The first appearance of epilepsy took place in consequence of a fright, and was repeated at very short intervals, but without any regularity. The fits were long and violent, sometimes lasting twenty-four hours. Each attack

appeared to commence at the stomach, and mount to the head; and, at its termination, the patient passed by stools both ascarides and lumbrici, and vomited some of these latter worms, together with a quantity of glairy matter. This patient had been much relieved by vermifuge remedies; but, upon the approach of puberty, the disease resumed fresh force, an alarm reproduced it, and the symptoms became more severe than even at first. By the advice of the physicians at Paris, a decoction of aloes, with nitre, was administered; which simple remedy, by discharging a quantity of ascarides, diminished both the number and violence of the attacks. From this exposé, our author infers that two principles tend to keep up the disease; the first being an extreme activity of the nervous system, and the other the influence of *diathese vermineuse;* this last principle proving the existence of a singularly strong tendency to the degeneration of the humours which nourish and reproduce these worms. The method of treatment, therefore, resolves itself into these two points:—

1st. To moderate the action of the sensitive and moving powers, by procuring, by well-directed excitation, a free development of those powers. 2d. To destroy the superabundance of mucous fluid, and to prevent the generation of the worms which is the consequence; and this last indication is the most important. In addition to the means usually employed against nervous debility,—such as warm baths, dry rubbing, &c.—the skin ought to be *animated* in different parts by the application of blisters, which are not to be left on long enough to produce a wound; and frictions with opium, camphor, and amber, dissolved in spirit of wine, are to be employed upon the thighs, legs, back, and along the spinal column. The principal treatment will consist in causing the patient to vomit three or four times on alternate days, by means of a dose of tartar emetic and ipecacuanha; then the patient is to be purged twice in the month, with a composition of cinnabar, guaiacum, jalap, rhubarb, and diaphoretic antimony, mixed with chicory water. In the intervals, he is directed to make use of pills composed of mercury, fern powder, camphor, valerian, assafœtida, and aloes. The coming on of the epileptic paroxysm is to be narrowly watched; and, if it is foreseen, vomiting is to be produced by glysters of salt and water, and by drinking warm water; and the glysters may continue to be employed in the intervals of the attacks. If, after the worms are entirely got rid of, the epileptic paroxysms continue, they must be combatted by the use of direct and appropriate remedies, principally antispasmodics. If, says our author, by the effect of these remedies, or by some salutary and unlooked-for change, a feverish attack should come on, it would be advisable to favour and maintain it long enough to resolve the epileptic disposition, since fever has occasionally been found to cure this complaint. The same observation extends to collections of matter, cutaneous eruptions, &c. The regimen is directed to be tonic and fortifying. The patient must avoid all sudden changes of the weather;

must avoid cold and damp situations, take a moderate quantity of exercise daily, and avoid all fat, unctuous, mucilaginous food.

Having now given a few specimens of our author's mode of disposing of his Consultations, we shall turn to the latter part of the volume, and extract one or two Cases; and which we do with the more pleasure, as we are enabled to give the results of the measures proposed, which, with one or two solitary exceptions, the Consultations do not afford.

The first case which we shall extract is that of a lady, thirty-four years of age, who was affected with a nervous head-ache, constantly aggravated at each period of menstruation.

The patient had lost both flesh and strength, had become very irritable; the abdomen was slightly tumefied, and this enlargement increased at the menstrual period; a sense of general uneasiness; slow and imperfect digestion; a hard, contracted pulse; respiration impeded; and palpitations of the heart, when the pain was violent, were the most marked symptoms. A sense of weight in the loins, and a creeping sensation in the thighs, always accompany the periods of menstruation, which are often interrupted and imperfect.

The treatment of this case consisted in obviating the irritability and moderating the faulty action of the uterus: for this purpose, a bleeding of four ounces was directed immediately after the cessation of the menses; the next day, an opening medicine; and, on the third, baths, and a bolus of four grains of camphor, six of castor, and one of opium. In addition to these baths, a pediluvium is recommended every evening; and an injection of a decoction of valerian and chamomile, with a few drops of laudanum, every second or third day. These remedies were continued for two months; frictions upon the internal parts of the thigh being performed six days prior to the expected return of the menses; then the bathing of the legs is to be more assiduously employed, and leeches are to be twice applied to the upper part of the thighs. Four glasses of an infusion of the flowers of mugwort, ten drops of tincture of aloes, and as much of the aperient tincture of iron, are given every day. After the lapse of two months, all the symptoms had given way in a great degree. The above remedies were continued; and to these were added pills made of valerian, aloes, henbane, and opium, gradually augmenting the dose, under the use of which the patient soon got entirely well.

The sixth case is an example of *epilepsy*, cured by an attack of fever, attended with a copious discharge of stools.

C. B., twenty-eight years of age, of a pituito-sanguine temperament, born of healthy parents, and possessing all the external marks of a healthy constitution, had enjoyed excellent health until his twentieth year, when he suffered from a violent peripneumony, accompanied with delirium and subsultus tendinum. The year following he had hospital-fever, which terminated favourably in eighteen days. After having joined the army three or four years, he saw several of his companions suddenly destroyed by the explosion of a mine. Immediately he expe-

rienced an universal trembling, and two hours afterwards had a violent attack of epilepsy, and which were renewed every day, at the hour when the explosion took place. From that period until his entering the hospital, on the 4th March, 1805, the disease presented no change: the attacks are sometimes more severe and of longer duration than at others, sometimes lasting five minutes, occasionally extending to a quarter of an hour; they consist principally of convulsive agitation and shaking of the upper and lower extremities, accompanied with contractions of the muscles of the face, loss of recollection, &c. In the intervals the patient is tolerably well: nevertheless, he complains commonly of a violent pain in the head, and a lively pain in the epigastric region. His countenance was melancholy; he sighed involuntarily; exhibited great lassitude; his sense of hearing was remarkably acute, the least noise producing a general tremor; the heat of the skin natural; pulse strong and full; respiration free, but sometimes interrupted, as if the blood found a difficulty in passing through the lungs. The stomach is often deranged, with little appetite and slow digestion, and costive bowels. The sexual organs do not feel the influence of this disease in any way.

Two methods, continues M. Dumas, present themselves to restore the harmony of the system: the first consists in procuring a calm of the nervous system, by moderating the influence which the affection of the head appears to exercise over the whole of the economy, and especially upon the epigastric organs; and revulsives and calming medicines will produce this effect. The second plan is to impress upon the system some violent shock, which, by a sudden revolution, may change the morbid relation between the sensibility and contractility of the system, and re-establish their harmony. Emetics and sudorifics are recommended for this purpose. On the 6th March, the first method was acted upon. Baths of the feet with mustard, bleeding in the foot, and frictions over the whole body, were resorted to, and continued until the 10th, excepting the bleeding. During these four days, an attack of epilepsy came on daily at noon; that of the 9th lasted a quarter of an hour, and left a convulsive motion of the lower jaw, such as is seen in the cold stage of fever. On the 11th, the foot-baths, injections, frictions with tincture of cantharides, fumigations, a grain of opium four times in the day: the last remedy intended to allay the pain in the head, which is supposed to proceed from nervous excitation. On the 13th, an attack of epilepsy, as violent as usual, supervened; the pulse high, face red, &c. Four leeches were applied to the inner part of each thigh; the opium is continued, and the baths with mustard. On the 14th, the attack was more moderate; the same remedies were repeated, excepting the leeches. On the 16th, they were re-applied, and the same treatment continued: there was no attack of epilepsy. From the 17th to the 25th, the baths are continued, and the patient is purged twice with rhubarb and jalap. The attacks came on each day, excepting the 21st and 22d. On the 26th, a different treatment was adopted: three grains of tartar emetic produced a considerable vomiting of glairy matter; in the evening, perspiration was produced by a sudorific potion. Every two days, the emetic and sudorific was repeated. On the 16th

of April, another dose of emetic was given: bilious vomiting ensued, and abundant sweating, without any sudorific medicine. On the 13th, an accession of fever took place, which lasted twenty-four hours, and terminated by copious black-coloured evacuations.

After this, the patient continued several months in the hospital, but had no return of his disease.

We have only one remark to make on this case, which is this —that all the former part of this treatment was not only lost time, but, from the state of the pulse, violence of the pain in the head, and other symptoms, much danger was probably incurred; and we doubt not that a moderate bleeding in the first instance, with a free use of purgatives and of emetic tartar, would very speedily have cut off the malady.

We shall conclude our extracts by a detail of the 13th Case, *palsy of the upper extremities.*

N—, aged seventeen years, of a robust constitution and sanguine temperament, accustomed to hard labour, and hitherto healthy, was suddenly struck with palsy of the upper limbs: he was enjoying perfect health at the moment of the attack, and presented all the exterior signs of strength and vascularity. The loss of motion was more complete on the right than the left side; the integuments preserved their sensibility; the pulse more developed on the side which had entirely lost its motion than on the other side; the intellectual faculties as usual; and respiration much impeded. These symptoms our author refers to two causes: 1st, to sanguineous congestion; the 2d, which is in fact only the consequence, refers to the loss of the power of muscular contraction in the members affected; and these two causes lead him to adopt two indications of cure.

On the 11th March, 1808, five days after the patient's admission into the hospital, the first order of remedies, against the plethoric affection, was commenced by a bleeding from the foot, to the amount of eight ounces, and baths to the legs, in which salt and vinegar are dissolved; internally, whey and nitre is given. The next day, six leeches are applied to the inner part of each thigh; the same remedies being continued. On the 14th, eight leeches are applied to the anus; and on the 16th, twelve ounces of blood taken from the foot. From thence to the 25th, the leeches and bleeding are again repeated; and then the patient's countenance loses its high colour, and he felt less weight and a sense of amendment; the leeches and bleedings are therefore suspended. From the 25th March to the 20th April, frictions along the paralysed members and vertebral column with tincture of cantharides, are recommended. Sudorifics and exciting medicines are also administered. The powers of contraction are gradually resumed; the strength returns; and the patient, after taking some slight doses of an infusion of arnica, leaves the hospital perfectly cured, after two months of treatment.

We have now given our readers a fair specimen of M. Dumas' practice: the nature of the work, consisting entirely of detached

cases and consultations, prevents us from doing more than this. There are no general principles upon which we can comment; and, in conclusion, we can only observe, that, however different the practice appears to be to that which we are accustomed to witness, and however puerile and trifling some of the remedial agents which our author depends upon may appear, in many respects the work will repay the trouble of a careful perusal, and afford some hints which we, in our eagerness to act from great and general principles, are too apt to overlook, in the management of chronic and complicated cases.

MEDICAL AND SCIENTIFIC BIBLIOGRAPHY.

Vexat censura . . . . . Corvos.

Art. I.—*Pathological Observations on the Rotated and Contorted Spine, commonly called Lateral Curvature, deduced from Practice,—in which are shown the Causes that produce it; the Reason for its being mistaken for an Incurvation of the Spinal Column; and the Means best adapted to its Prevention and Cure, agreeably to the Principles laid down, and the Author's Experience.* By Andrew Dods, M.D. late of Edinburgh, and Surgeon in the Royal Navy.—pp. 239. Cadell, London; Blackwood, Edinburgh. 1824.

The author of this work has some very peculiar opinions on the causes, appearances, and modes of treating, lateral distortions of the spine. He seems to consider this kind of deformity as arising, not from girls sitting carelessly or awry, but from their sitting in an erect posture. This, however, is not so extraordinary a deviation from the opinions commonly entertained as that which he expresses regarding the condition of a girl who would by most persons be regarded as crooked. Our author informs us, that she is not really crooked, merely labouring under a changed aspect of the natural profile, or semi-profile, of the spine; that, in short, surgeons have all along been deceived, and that the curve is but "visual, as well as a manual, deception." The mode of treatment is consistent with the views which the author entertains of the causes of distortion; for it differs from that of every other surgeon, in so far that a concave surface is recommended instead of a plane, when it is intended to give rest and ease to the muscles of the spine.

We shall lay before our readers some extracts from the work, to show the views which the author has formed, and the manner in which he treats the subject.

After some remarks on the importance of the subject, and the injury arising from the restraints imposed on their persons by devotees at the shrine of fashion, the author proceeds—

"Whoever, then, shall impose a restraint upon it (the body) in this respect, must be considered guilty of a breach of the laws of nature, and shall not fail to be punished for his temerity. Whoever shall, either accidentally or wilfully, de-

prive any of his members of motion, or, what is the same thing, who shall fail to exercise the functions of its muscles, will assuredly distort such member, and lose the use of it." (p. 52.)

We cannot afford space for the long discussion on scrofula, nor for the reasons which have induced the author to call the malady "contracted spine;" but we shall follow him into his description of the state of the spine when it has become crooked, and here we shall find that he has some ideas peculiar to himself.

"This," says the author, at page 155, "is the difficulty which has hitherto presented itself, but which I have now surmounted, and hope on philosophical as well as anatomical principle; shewing what have been all along considered curvatures of the spinal column is but a changed aspect of its natural flexures, which are brought into profile, or rather semi-profile, by the aggregate rotatory movement of the vertebræ upon each other; the consequence of the permanent contraction of the muscles that move them, produced by malposition: and that, therefore, medical men have been striving all along to account for what does not exist, the whole being a visual, as well as a manual, deception."

The author admits that the view which he offers of spinal distortions, differs from what has been generally given; and upon this he very honestly, and with some simplicity, makes the following observations:

"As some corroborating proof will naturally be looked for, I shall, as the best mode of affording it, candidly describe the manner in which I was first led to a knowledge of it myself, with my reasoning thereon, and what I resorted to, to prove it.

"Having been induced, of late years, to apply myself more particularly to the investigation of this interesting deformity, and being previously convinced, in my own mind, that it depended more upon muscular contraction, brought on by the fashionable modes and customs of the day, than upon structural disease of the vertebræ, I was led to the adoption of friction for its cure; and, in order that I might give it the fairest trial possible, I was induced to become the operator myself.

"During the course of my operations upon several patients, I was struck in all of them (for they were all contorted to the right side,) with a considerable bony hardness and projection on the left side of the loins, raised nearly to a level with the spinous processes; and this I found to be the case in the patients whose spine exhibited little or no apparent curvature, as well as in those in whom the apparent curvature was very great. Being led to investigate this anomaly, I redoubled my exertions to discover the cause; and I found, after the muscles had been relaxed by friction, (for they were in every case extremely rigid,) that the bony projection was the transverse processes of the vertebræ of the loins, which I could now as distinctly feel and count as the spinous. From this circumstance I was led to examine whether I could feel the transverse processes of the same vertebræ on the opposite side; but without effect, for they appeared to have sunk inwards, completely out of reach."

Dr. Dods seems to have puzzled himself unnecessarily about "organic" and "functional" contraction of muscles. From the following passage our readers may form some idea of his difficulties:

"Any one who will take the trouble to examine into the state of the muscles of the back, while the body is stretched upon either of these planes, the horizontal or inclined, must plainly perceive, I think, that they approach nearly to the greatest degree of their organic contractility; and that it is quite impossible for them to be in the slightest manner relaxed, so long as the person continues in their extended position." (p. 145.)

This most extraordinary doctrine, that a person is not at rest while lying flat on the back, will be found to have been the idea constantly operating on Dr. Dod's mind, during the whole of his inquiry. At page

166, he states that, "as the production of spinal distortion has been accounted for purely on the principle of muscular contraction, so must the cure be conducted solely on that of muscular relaxation;" and, at page 213, we have a repetition of this sentiment, and, at the same time, the announcement of the principle which he follows in the treatment.

"I hold it to be an axiom in physic, as well as surgery, that to cure a disease is to remove the cause. As spinal contortion, then, depends on the continued extension of the body, and the contraction of the spinal muscles thereby produced, so, therefore, this being the cause, it must be removed before we can possibly remove the contortion. Now, there is no way, with which I am acquainted, of doing this so effectually, as by bending forward the body and relaxing the spinal muscles; so, therefore, after frictions, I place my patients on their backs upon a concave elastic couch."

It would be easy to show how completely the author is mistaken in supposing that the muscles of the spine are relaxed, when a patient is laid in this position; but it is unnecessary to enter into any discussion on a question, which can be decided at once by any of our readers, who choose to make the experiment of lying for ten minutes on such a couch as the author recommends.

ART. II.—*An Enquiry into the Causes of the Curvatures of the Spine; with Suggestions as to the Means of preventing, or, when formed, of removing, the Lateral Curvature.* By T. JARROLD, M.D.—pp. 147; two Plates. Longman and Co. London.

ON our first looking through the pages of this work, we were a little astonished at the style in which several of the cases were given; but, on referring to the Preface, we found an explanation,—viz. that it had been adapted for the general reader. The same circumstance will, perhaps, explain how it comes to contain opinions so entirely at variance with those generally received.

The volume contains some remarks on the natural structure of the spine,—on carious spine,—on the hip-joint disease,—and on anomalous diseases of the spine; but, as the author announces his work as a treatise on *Lateral Curvature,* we shall confine ourselves to the task of giving our readers some idea of the notions which he entertains on this, at present, very popular question. In doing this we shall avail ourselves of the author's own words, and the following quotations will show that he considers lateral curvature to depend not only on *disease,* but on a specific, and even an hereditary, malady.

"In the view which I take of the subject, a specific disease distends the cartilages, which the energies of the constitution frequently removes, and the figure suffers only in degree. In other and more advanced cases, the distention is so considerable as to occasion an uneasy sensation about the part, the effort to relieve which causes the curvature. It is not that the ligaments, or the bones, or the muscles, are diseased, or that the disease of the cartilages is of itself the cause; but, the muscles being made to act partially on the spine while the cartilages are in this state, the same effect follows as when pressure is applied obliquely to the ankle." (P. 88.)

"In a review of the origin and progress of this malady, connected with the

appearance after death, it is evident that disease, not debility, originates the lateral curvature." (p. 89.)

"Were it not a specific disease, it might, like the outward curvature, be accidental and solitary; one individual of a family might be its victim: but it spreads its influence through the blood, and, like the gout, though it slumbers, it has not ceased. Every stage, from the elevated shoulder to positive crookedness, may be found in one generation; in the next it may not appear, but returns in the third." (P. 95.)

Although these doctrines were not calculated to raise our opinion of the author's pathological acumen, we confess we were not prepared for the flight of imagination which presents itself when we come to the treatment. It appears that Dr. Jarrold regards curvature of the spine as bearing a strict analogy to bronchocele, and even to be capable of cure by similar means.

"The diseases of the cartilages and of the bronchial glands most *affect* females: both commence in youth, and are not excited or retarded by other diseases. This seeming relation led to the use of the same means of cure, and with the most marked and beneficial result, so as to justify the expectation that, at no distant period, the lateral curvature will, like the scars of the small-pox, be a reproach to the parents, rather than a necessary evil." (P. 94.)

"It has been my object to prove that the lateral curvature has its origin in a specific constitutional disease, and consequently requires a constitutional remedy. And, as I have before hinted that there might be some relation between it and bronchocele, I have made use of similar remedies: from ten to fifteen grains of burnt sponge, and from four to six grains of carbonate of soda; and, if debility be considerable, twenty drops of nitric acid are directed to be given daily. Very soon the increased flesh on the shoulders begins to diminish, and in two or three weeks disappears. The shoulder-blades at the same time fall, and re-occupy their natural situations. The health, which had been more or less disturbed, resumes its ordinary state; the mind becomes cheerful, and capable of application; the languid, dispirited aspect, which seemed to call for the use of tonics and stimulants, is dispelled without them. Medical treatment is seldom further required, unless the appetite and digestion be impaired." (P. 117.)

We have in this Number presented to our readers two works on the Diseases of the Spine, which certainly have the merit of containing some original ideas; and we repeat that we have communicated them almost entirely in the author's own words. In one, the author insists that the distorted spine is but a visual as well as a manual deception, and that surgeons have all along been mistaken in supposing that, because a person is crooked, the spine is curved. In the other, the author informs the world that the hump on the shoulder originates in causes similar to those of bronchocele; and, consequently, may be removed (sometimes in three weeks) by burnt sponge and soda!

ART. III.—*An Elementary System of Physiology.* By JOHN BOSTOCK, M.D. F.R.S. &c. Vol. I.—8vo. pp. 518. London: Baldwin, Cradock, and Joy. 1824.

WE are aware that Dr. BOSTOCK has been some time employed in collecting materials for this work, from among the extensive resources which this author commands. His avowed object is to present the physiological student with a concise view of the present state of the science, without endeavouring to compile a popular treatise; and yet,

at the same time, it is intended for the use of the general reader. The first volume has issued from the press alone, and contains a portion only of the whole work.

A work of this description has long been esteemed as a great desideratum, and must prove eminently useful in our days, when new experiments, new views and facts, are continually pouring in upon us from many quarters, and are sufficiently numerous and various to hold the practised student in doubt, and utterly to confound the ex-professionally learned.

It is evident that the accomplishment of such a task requires no small degree of industry and judgment, when widely-scattered facts have to be collected together, and the dross to be carefully sifted from the ore. The gleanings of the physiological labours of the past and present age, certainly afford a rich and abundant harvest, perhaps little less important than that which has, of late years, sprung more suddenly from the researches of modern chemistry. How far those changes which result from recent inquiries affect the practical application of medicine generally, it is difficult to determine; and how much improvement physiology has experienced, we must leave posterity to settle for themselves. The present century finds the science freed from fetters which bound it in the last; but it may be said, that it has since run a wild unchecked career, and which it will probably continue to pursue, till sober reason and experience can limit the boundaries of discovery.

Dr. Bostock, in the first place, endeavours to clear the ground before him, by referring to the doctrines of the ancients, and pointing the reader's attention to the successive theories and systems formed at different periods to the present age. To effect this, he selects the most popular authors of each succeeding era, affording us concise reviews of the opinions and discoveries of Hippocrates, Aristotle, Galen, Stahl, Hoffmann, Boerhaave, Haller, Cullen, Hunter, and Bichat; noticing how one doctrine gave place to another, and the changes produced in the science by every new view, as it arose.

The plan of the work is next developed. He divides all the functions of the living body into two grand divisions: the one relating to the *contractile*, and the other to the *sensitive* properties; the first belonging to *muscular*, and the second to *nervous* matter. The first division embraces the individual functions dependent upon *contraction*, the circulation of the blood, respiration, animal temperature, secretion, digestion, assimilation, absorption, and generation; all of which are preceded by an account of the nature of the two powers of contractility and sensibility, and of the organs by which they are exercised,—the muscles and the nerves: and, as bone and membrane constitute the basis of the body, a description of these is premised.

The contractile functions, as above enumerated, being described, it is next intended to review the subjects of the second great division, the *sensitive* functions. This division includes what are termed the five senses,—sight, hearing, smell, taste, and touch. There will also be added to these some other classes of sensation, equally specific in their nature, but less understood and recognized. The most important of

these latter are the sensation which accompanies muscular contraction, that of heat and cold, and that of hunger.

Another class of phenomena, of a compound nature, in which a sensitive function is succeeded by some intellectual operation, or in which an intellectual operation produces a change in the corporeal organs, will next be noticed. This class, however, the author intends to treat briefly, for fear of encroaching upon the province of the metaphysician, —one which, he wisely foresees, would lead him far astray from the boundaries of physiology. Accordingly, he will limit himself to those phenomena only indirectly connected with the science of physiology,—such as the effects of association, habit, imagination, sympathy, and volition. But the author does not stop here; he is tempted to handle the delicate subject of craniology,—and we wish him well through it. Some observations upon the much-controverted point of the nature of the connexion between the intellectual faculties and the organ by which they are exercised, are connected with craniology; and he concludes with some remarks upon the natural progress of the animal body, from the commencement of its existence, through its state of maturity, to its decline and final dissolution.

The present volume goes no further than the circulation of the blood: our criticism must, therefore, be deferred chiefly till the completion of the whole work.

As to the arrangement adopted, every author seems to have his own fancy upon this point; and, although there is scarcely any system quite free from objections, yet it is, perhaps, a matter of less importance than usually supposed. We should ourselves have given precedence to the nervous function, because all others are either directly or indirectly governed by it. Whilst, therefore, we admit that all vital actions are referable either to contractility or sensibility, we object to all the functions being embraced by two grand divisions, separating these two general functions as the immediate causes of the others, but independent of each other; for we see not how contraction, whether voluntary or automatic, can be considered independent altogether of nervous influence: a proposition inferred, if not intended to be so, to all appearance, by the arrangement adopted.

The author treats his subject in a manner highly useful to students, by referring to authorities, so as to form one condensed history of physiology, and points out, with a masterly hand, where credit and reliance may be given, and where it should be withheld. This plan naturally gives his style an air of pedantry, and it may, perhaps, appear complicated and tedious to many. As a work of reference, however, it is highly valuable, and ought to have a place on the shelves of every medical library. It pretends to no display of descriptive language; it is, therefore, written with more laboured caution than eloquence. We cannot help thinking that a clearer arrangement might be adopted for students; and many points referred to in the progress of the work, might have been more conveniently considered in one general introductory view, prefixed to the history of physiology, with which the work is introduced. For example, the student's mind might have been made

clear upon the connexion between life and organization, and the definitions and examples of these might have preceded, instead of being subsequently referred to, when occasion required; as also how far the exact sciences are applicable to the living body; and the degrees of obedience which the vital powers pay to physical laws, with their mutual influence over each other, when combined together.

From the multitude of opinions cited on most points, an objection, very common to compilations, exists, from the great liability of the inexperienced being perplexed, and made to waver in their belief. Certainly, the subjects of this volume are of a most controverted nature. We question whether the London pupil will find time to imbibe all the instruction which this work affords; and either, therefore, a less extensively learned work, more upon the scale of a course of lectures, would not be preferable as a companion to the studies of anatomy, surgery, and medicine. The present publication may do better when, in after-life, the pupil has leisure to con it over by his library fireside. Certainly the deepest physiologist will find it useful to peruse Dr. Bostock's "Elements of Physiology," as it combines a vastly extended body of facts and theories, with a copious reference to authorities.

We quote the following, as a specimen of the author's mode of treating a controverted point, in reference to the sensibility of membrane:—

"With respect to the sensibility of membrane, considered as a matter of fact, independent of any speculation concerning the nature of organization or vitality, the opinions of physiologists have been various; and it was especially the subject of a warm controversy, about the middle of the last century, between Haller and Whyit. As is often the case in points of this nature, the question has been decided by a kind of compromise: it is generally admitted, with Haller, that simple membrane is insensible in its healthy and natural state, but that it is liable to inflammation, and that it then becomes sometimes exquisitely painful. The cause of this fact, the excessive degree of pain, which are excited by disease in parts that are at other times without sensation, is, perhaps, not altogether understood. We may remark concerning it, that one effect of inflammation is to enlarge the bulk of the inflamed part, and the pain is generally in proportion to the difficulty with which the part admits of this extension. A high degree of inflammation may exist in loose cellular texture, and we may be scarcely sensible of its existence; while the inflammation of the periosteum of the smallest bone, as of a tooth, of the sclerotic coat of the eye, or of the tense membrane about the finger-nail, will be almost intolerable. In these cases, we shall probably always find that, even if the inflamed part be without nervous filaments, which give it sensibility, still there are some branches of nerves immediately contiguous to it, which, in consequence of the firmness of some of the neighbouring parts, are pressed upon and irritated, while the blood-vessels connected with them are in a state of plethora; for it seems to be a general law of the animal economy, that no cause is more powerful in producing pain than a certain degree of pressure upon a nerve, while its sensibility is augmented by an unusual determination of blood.

"It is probable that much error and confusion took place on the subject of the sensibility of membrane, among the anatomists and physiologists, after the revival of letters, in consequence of their blind veneration for the ancients. Hippocrates, who had but an imperfect knowledge of the existence and use of nerves, confounded them (or at least placed them in the same class) with the tendons, from some similarity in their visible structure and appearance; and, having observed very serious effects to ensue from injuries of the proper nerves, he laid it down as a maxim, that tendons and other membranous parts are among the most sensible organs of the body. This erroneous opinion materially influenced, not only phy-

siological speculations, but medical and surgical practice, even as late as the middle of the last century, long after the distinction between nerves and tendons was thoroughly understood. Even Boerhaave fully subscribed to this doctrine, in which he was warmly seconded by his learned, but obsequious commentator, Van Swieten; and the influence of the old hypothesis upon our language may still be observed in the present day.

"John Bell, in his usual animated and impressive manner, describes the dreadful effects which this opinion concerning the great sensibility of membrane, formerly produced in the operation of lithotomy. As the bladder principally consists of membrane, it was agreed by all the learned operators, for a succession of ages, that it would be improper to cut or divide any part of it; and, therefore, in order to extract the calculus, a variety of instruments were employed for the purpose, as it was said, of dilatation, but which, in fact, caused the most cruel laceration of the organ itself, and of the neighbouring parts. It is truly astonishing to observe how the weight of authority bore down the clearest dictates of reason, and the most decisive results of experience; and how the most obvious facts were warped and misconstrued, before mankind would submit to prefer the evidence of their own senses to the mere hypothetical opinions of the ancients.

"From these remarks it will appear that, except bone, membrane may be regarded as the most simple in its properties of all the organized parts of the body. By this expression, I must be understood to mean that the properties which belong to it are likewise found in many other natural objects. Cohesion necessarily belongs to all solids, while flexibility, extensibility, and elasticity, are possessed by many vegetable and some mineral substances, and also by dead animal matter; whereas, spontaneous contractility and sensibility are the exclusive properties of the living body. We are, however, as much unacquainted with the intimate nature and immediate cause of the properties of membrane as of contractility and sensibility; only we are much more familiar with these operations." (P. 36—39.)

At present, the most interesting points of physiology seem to be the discoveries of the separate functions of the nerves in their distribution, as pointed out by Bell, &c.; and in their radical origins from the spinal cord, as proved by Magendie; and also the highly important discoveries, published by Flourens, relative to the seats of sensation and irritation in the brain, a subject upon which Rolando, Haller, &c. experimented, but not with the success which has recently attended the experiments of the French physiologists. Upon these points, we quote the following remarks of the author:—

"Although we have so little certain knowledge respecting the exact parts of the brain, which may serve as the respective centres of the two functions of perception and volition, some very interesting experiments have been lately made by Mr. Bell and M. Magendie, which confirm the opinion that had been advanced by physiologists as a plausible conjecture, that the transmission of these two powers from the extremities to the brain, or from the brain to the extremities, is effected by different nerves, or at least by different nervous filaments. The nerves that proceed from the spine have a double origin, or are composed of two nerves, —one proceeding from the anterior, and the other from the posterior, part of the cord. Now, it has been found, by direct experiment, that the parts to which the nerves are sent are deprived of motion and sensation respectively, according as the anterior or posterior roots of the nerves are divided. From this separation of the functions of the nerves, and the appropriation of each function to a separate organ, we gain an analogical argument for the same kind of separation in the brain; and this conjecture would appear to be sanctioned by the experiments of M. Flourens and M. Rolando.

"A very interesting series of facts has been lately brought forwards by Mr. Bell, respecting the functions of the nerves, which throws considerable light upon their mode of action, and their connexion with the other parts of the system. There are certain circumstances in the anatomical structure and the distribution of

the nerves, which led to the arrangement of them into two classes, and which indicated that they each serve different purposes in the animal economy. From the situation of these two sets of nerves, with respect to their origin and to each other, Mr. Bell has given them the names of symmetrical or original, and irregular or superadded. The first set (which might perhaps be called, more appropriately, the general nerves,) consist of the fifth pair of the cranial, and all the spinal nerves; they have double roots, one of which is connected with ganglia; they pass laterally to the two halves of the body, the two sides having no connexion with each other, and they are distributed to all the muscular parts that are under the control of the will. They appear to be the organs of perception and volition, deriving, as we may conjecture, these two functions from their double roots. These we may regard as that part of the nervous system which serves the purpose of establishing our connexion with the external world.

"Mr. Bell's second set of nerves proceed by single roots from the base of the medulla oblongata, or the parts immediately connected with it; they proceed in a much more irregular manner than the former, and are distributed to all the organs which are concerned, either directly or indirectly, in the function of respiration. From this circumstance they have received the denomination of respiratory nerves, as well as that of superadded or irregular. Their course is designated by this last term, as they pass from one organ to another in the most intricate manner,—connecting them together, passing across the general nerves, occasionally uniting with them, and forming the connecting link between the two halves of the body. These nerves are not under the control of the will, and are not capable of exciting perception; they are, therefore, furnished only with the faculty of transmitting the nervous influence, or with what Dr. Philip styles nervous power, in opposition to sensorial. Some very curious and important pathological deductions have been made by Mr. Bell, from the new views which he has given us on the subject of the nerves; and we have also a number of additional remarks by Mr. Shaw, which confirm and illustrate Mr. Bell's doctrines, and give us reason to expect that they may be applied with great advantage to the practice of medicine and surgery.

"The result of our observations upon the nervous system and its functions is, that it has two distinct powers, that of receiving and transmitting impressions, which is exercised by the nerves and spinal cord, and that of perception and volition, which is more immediately exercised by the brain. Upon this principle Blumenbach has arranged the organs of these functions into the two classes of sensorial, comprehending the brain and its immediate appendages, and the nervous, properly so called, including the nerves, the plexuses, and the ganglia. The sensorial organs are the exclusive seat of the powers of perception and volition, and of the intellectual faculties; while the office of the nerves is to serve as media of communication between the common centre and the organs of sense and motion." (P. 280—284.)

In conclusion we beg to observe, that, although we cannot hazard a determinate opinion upon the merits and utility of a work so unfinished as this at present is, yet, if the subsequent parts are equal to that published, we have no hesitation in declaring it to be our opinion, that it is the best elementary work of the kind in existence, and one of the greatest utility to the profession at large, as a work of deep and accurate research and extensive reference.

ART. IV.—*The Animal Kingdom, arranged in conformity with its Organization.* By the Baron CUVIER, &c. &c. &c. *With additional Descriptions of the Species hitherto named, of many not before noticed, and other original Matter.* By EDWARD GRIFFITH, F.L.S. and others.—8vo. pp. 203; with eighteen Plates. London: G. and W. B. Whittaker.

NOTWITHSTANDING that we find "Natural History" enumerated in our title-page among the objects of this Journal, yet such is the press of matter more purely professional, that we are seldom able to turn from the beaten path of medicine into those more varied fields of investigation, into which we would naturally be led by works similar to that now under our consideration. Zoology, indeed, is a study which seems scarcely to have flourished among us: at least, its cultivation has not hitherto given rise to any works of pre-eminent merit; and we imagine that, while in the other branches of science we can bring their equals to the best in Europe, yet, in this department, the names of Buffon, Cuvier, St. Hillaire, and Rudolphi, are unrivalled by any we can oppose to them. Indeed, almost the only systematic work on Zoology we possess is that of Dr. Shaw, which cannot be regarded as complete, or commensurate with recent discoveries. We have, therefore, much satisfaction in making known the objects of the present work, as far as our circulation extends, giving to it whatever benefit can result from the humble meed of our commendation.

The title-page expresses pretty clearly the design of the learned translator, which is, in fact, to give the whole of CUVIER's "Regne Animal," with such additions as may render it interesting as a general zoological biography. The intimate connexion of such pursuits with the legitimate objects of our Journal, is almost too obvious to require illustration; but the words of Cuvier, in his Preface, are so much to the point, that we cannot resist our inclination to quote them. "I was necessitated," says he, "in furtherance of my object, to make anatomy and zoology, dissection and classification, proceed hand in hand together; in my first remarks on organization, to look for the best general principles of distribution; to employ those principles in making new observations, and those new observations, in their turn, to carry to perfection the general principles of distribution. In fine, to produce from this action and re-action of the two sciences such a system of zoology as might serve for an introduction and a guide in anatomical researches, and such a body of anatomy as might tend to develop and explain the zoological system."

Particular Physics, or Natural History,—Of Living Beings, and of Organization in general,—Division of organized Beings into Animals and Vegetables,—Of the Forms peculiar to the organic Elements of the Animal Body, and of the principal Combinations of Chemical Elements,—Of the active Forces of the Animal Body,—A Summary Consideration of the Functions and Organs of the Animal Body, and of the various Degrees of their Composition,—A rapid Sketch of the Intellec-

tual Functions of Animals,—Of Method or System, in its application to the Animal Kingdom,—General Distribution of the Animal Kingdom into four grand Divisions.

This last section we shall quote, both as giving a concise view of the great divisions adopted by Cuvier in his "Regne Animal," and at the same time illustrating the manner in which the translation is executed.

"*General Distribution of the Animal Kingdom into four grand Divisions.*

"If we divest ourselves of prejudices founded on the divisions of the animal kingdom formerly recognised, and consider animals without reference to their relative size or utility, our own degree of knowledge respecting them, or any other extraneous circumstances, we shall find that there are four principal forms, after which all living beings appear to have been modelled. The basis of these distinctions is laid on the nature and organization of the several creatures themselves: the ulterior divisions of them, with whatever names they may have been decorated, are but slight modifications of the primary; and consist entirely in the addition or development of certain parts, which make no essential change in the general character of their conformation.

"In the first of these general forms or models, including that proper to man, and the animals resembling him most nearly, the brain and the chief trunk of the nervous system are enclosed in bony coverings,—the former called the cranium, and the latter the vertebra. To the sides of the vertebra, as to a central column, are attached the ribs and the bones of those limbs which form, as it were, the framework or carpentry of the body. The muscles, generally speaking, form a second covering for the bones which they put into action; and the viscera are enclosed in the head and trunk.

"Creatures of this form are denominated 'vertebrated animals,' (*animalia vertebrata.*)

"These have all red blood, a muscular heart, a mouth with two horizontal jaws, distinct organs of vision, smell, hearing, and of taste, situated in cavities of the head, and never more than four limbs. The sexes in these animals are invariably separated, and a similar distribution prevails among them of the medullary masses, and of the principal branches of the nervous system.

"On a close examination of each of the parts of this grand system, we shall discover a general analogy of conformation, even in the species most remote from each other; and can easily trace the gradations of the same plan from man to the lowest of the fish.

"In the conformation peculiar to the second grand division of living beings, we find no skeleton. The muscles are simply attached to the skin, which forms a soft and contractile covering, from which proceeds, in several of the species, a scaly or laminous substance, called shells, the position and production of which are analogous to those of the mucous body. Within this general envelope are the viscera and nervous system, which last is composed of many scattered masses, attached together by nervous threads. The chief of these masses, placed in the œsophagus, receives the denomination of the brain. Of the senses, properly so called, we can seldom distinguish, among these animals, more than the organs for those of taste and vision; and we sometimes find that even these are wanting. One family alone exhibits the organs of hearing. In other respects, this division is characterised by a complete circulating system, and peculiar organs of respiration. The apparatus for digestion and secretion are scarcely less complicated than are those of the vertebrata.

"We give to the animals, whose conformation is modelled according to this second form, the appellation of Mollusca.

"Although the general plan of their organization is not so uniform as that of the vertebrata in relation to external configuration of parts, yet even here the degree of resemblance is generally analogous, both as to structure and functions.

"The third general form is that of insects, worms, &c. Their nervous system consists of two cords extending along the belly, and swelled out, at regular intervals, into knots or ganglia. The first of these, placed on the œsophagus, though

called the brain, is not much larger than the rest. The covering of their body is divided by transverse folds into a certain number of rings, the tegument of which are in some hard, and in others soft; but the muscles are invariably attached to their interior. We often find articulated limbs attached to the sides of the body or trunk, but it is as frequently destitute of any.

"This division we denominate 'articulated animals,' *(animalia articulata.)*

"It is in these animals that we can observe the transition from the circulating system in closed vessels, to a nutritive process performed by simple imbibition; and likewise a transition corresponding to this from the respiratory system in organs confined to certain parts, to the same operation performed through the medium of trachiæ, or air-vessels dispersed through the entire body. The organs of taste and sight are the most distinct among the articulated animals. A single tribe possesses those of hearing. The jaws of this division, when any are to be found, are invariably lateral.

"The fourth and last form comprehends the entire of those animals usually known under the name of zoophytes, and which may also be termed, with propriety, 'radiated animals,' *(animalia radiata.)*

"In the three divisions preceding this, the organs of motion and sensation are symmetrically disposed, as it were, on the two respective sides of a certain axis. In this last, similar organs have a circular arrangement round a common centre. The zoophytes, in truth, approach nearly to the homogeneous character of plants. They possess neither a nervous system sufficiently distinct, nor particular organs of sensation. In a few of them we may discover, with difficulty, some vestiges of circulation. Their respiratory organs are generally upon the surface of the body. The intestines of the great majority consist of a sort of bag, through which there is no passage; and those which are lowest in the animated series exhibit nothing but a kind of homogeneous pulp, possessed of motion and sensibility."—(P. 60—64.)

We next have the first grand division of the animal kingdom, viz. the *vertebrated animals;* first in the list of which stand the *Mammalia.* Prevented, as we are, by our limits, from being minute, we shall content ourselves with selecting a few facts with regard to the anatomy of this class, which are common to them all. The upper jaw is fixed to the cranium, the lower being articulated to a condyle; the neck (with one exception) is composed of seven vertebræ; the anterior ribs are attached to a sternum; the anterior extremity to a shoulder-blade, which is not articulated with any other bone, though frequently resting on the sternum through the medium of a clavicle. The posterior extremity is articulated with a pelvis.

The brain is composed of two hemispheres; and contains a corpus callosum, two lateral ventricles, corpora striata, thalami optici, and tubercula quadrigemina. Between the optic thalamii is a third ventricle, communicating with a fourth beneath the cerebellum. They have all the prominence denominated *tuber annulare.*

The eye is always lodged in a socket, and has two lids, with more or less of a third. The ear is always provided with a tympanum and membrana tympani; four small bones, a vestibule, semicircular canals, and cochlea. The cranium is divided into three compartments. The tongue is always fleshy, and is attached to a hyoid bone. There is a velum palati, which establishes a direct communication between the larynx and back part of the nostrils. The organ of voice in all is situated in the upper part of the trachea.—The lungs are two in number, and are enclosed, without adhering, between the ribs and diaphragm. The intestinal canal is suspended by one fold of the peritoneum, while another hangs in front of them.

The generation of the mammalia is viviparous, and the young are nourished for some time after their birth with milk; a secretion peculiar to the class.

Next in order comes the division of the class Mammalia into orders: first follows

The *Bimana,* or man, the only genus in the order to which he belongs, and zoologically distinguished by having hands at the upper extremities only; the posterior being employed in walking.

The *Quadrumana,* having hands at the four extremities.

Carnivora, so called from the nature of their food; they have no thumb capable of free motion, or of being opposed to the rest.—These three orders have three different kinds of teeth,—viz. molar, canine, and incisor.

Glires, having extremities similar to the preceding, but wanting the canine teeth, and having incisors in the front of the mouth adapted for a peculiar kind of mastication.

Edentata, so called from the defects of their teeth; the incisors being absent, some wanting the canine, and some having no teeth at all. Their extremities are much cramped, and they have large claws.

Ruminantia, known by the cloven foot, the want of incisors in the upper jaw, and the presence of four stomachs: as the name implies, they ruminate.

Pachydermata includes the rest of the hoofed mammalia, and are distinguished by the thickness of their hide.

Cetacea. This constitutes the last order of the mammalia: they have no posterior extremities; they live in the water, and are remarkable for their gigantic size.

In conclusion, we have a short sketch of the natural history of man, by Cuvier, as the first genus of his first class and order; and a supplemental history of the same animal, by the translator. These investigations have been thought to lead to opinions hostile to the received doctrines of religion; and on this point Cuvier has behaved rather jesuitically in all his writings, not caring to commit himself one way or other. His translator, however, has determined not to incur any suspicion, being an open opponent to those who have enlisted science under the banner of scepticism.

We have thus given an outline of the contents of this first portion of Mr. Griffith's undertaking, and we have done so, not without the hope of inducing some of our readers to seek for further information in the "Animal Kingdom," convinced as we are of the direct tendency of such studies to open to us a vast field of discovery in the physiology of the human frame.

STATISTICAL MEDICINE.

ART. I.—*Medical Report, laid before the Annual General Meeting of the Governors of the Hospital for Small-Pox; held June 3, 1824.*

MY LORDS AND GENTLEMEN,

THE exertions of your medical officers for the cure and prevention of small-pox, have been rewarded, during the last year, by a degree of success, which, compared with the results of former years, it is most gratifying to your Physician to report.

The total number of in-patients admitted during the year 1823, amounted to 151; of whom, 114 were discharged cured, and only 37 died,—being very nearly the lowest rate of mortality which the records of your Hospital present for the last forty years. In the first five months of the present year, 72 patients have been admitted; of whom 19 have died,—being in the somewhat increased ratio of 25 in 100. The remainder have been either discharged cured, or may now be seen in the wards of the Hospital, convalescent. One-third of those who have died since the commencement of the present year, exhibited in their bodies all those extreme marks of violence and malignity of disease, which, precluding from the very first all hopes of relief, have rendered the small-pox, in every age of the world, an object of such disgust and dread.

The arrangements which have been made with the guardians of the poor in several of the parishes of the metropolis, (particularly St. Giles in the Fields,) have caused an unusual number of infants and children to be admitted lately within your walls; and your Physician is sorry to state, that a very large proportion of the mortality has fallen upon that helpless class of patients. Fourteen children under seven years of age (one-fifth of the total admissions,) have been received into the house since the 1st of January of the present year; and of them, eight have died.

Reverting to the proceedings of the year 1823, your Physician has to report, that, of the 151 patients treated within its walls during that period, forty-seven had previously been vaccinated. Of these, in the ordinary course of the disease, and without the protecting influence of vaccination, twelve, at the very lowest computation, would have died. It must, then, be highly satisfactory to the Governors to learn that the *whole of these persons* have been restored to society. It is not, indeed, to be denied that seven of them suffered severely under the attack of the disorder, and that it required from four to six weeks for *their* perfect cure; but it is no light praise of vaccination to say, that, even when imperfectly performed, (and there was reason to presume that such had been the case in most of these instances,) it still had the power of mitigating the horrors of this dreadful disease, and of preserving life, though it proved insufficient to resist the inroads of the contagion.

Of the 72 persons admitted since the commencement of this year, two had been inoculated for the small-pox, and bore the marks of having already once passed through the disease. Nineteen had been vaccinated; and it is the painful duty of your Physician to report, that of them one died, without mitigation of the symptoms in any stage of the disorder. The case was that of a young woman, vaccinated, when an infant, in the country; and your Physician took pains to ascertain the exact mode in which the process had been conducted. This he was happily enabled to do, with the assistance of a professional gentleman residing on the spot, whose inquiries tended to establish, most satisfactorily, that vaccination had in this instance been performed imperfectly and unskilfully, and that no reasonable confidence could at any time have been placed in it. The melancholy result of the case, however, will not be without its use, if it impresses upon all those who are engaged in vaccinating, the indispensible necessity of a close attention to every stage of that process, upon which the safety of the individual in after-life so immediately depends.

Your Physician turns with pleasure to notice, that, in the year 1823, 3129 persons were vaccinated, under his superintendence; and that, in the first five months of the present year, 1280 have passed through the same protecting process. With most unfeigned satisfaction he can add, that at no period, since the discovery of vaccination, has the confidence of the lower orders of people in this town, in the security which it is capable of affording, appeared to him greater than at present. It ought well to be considered, too, that no persons have such good opportunities of judging; for the contagion of small-pox, which visits provincial towns only at intervals, is always present in London, seeking whom it may devour. Those, indeed, whom a few unfavourable cases have impressed with an undue sense of the imperfections of the vaccine influence, would receive an useful lesson by attending at your Hospital, at the hours appropriated to vaccination. They would then learn to appreciate, in the grateful acknowledgments of thousands, the true value of that great blessing, which it was the glory of JENNER to have diffused;—and, though occasional failures will undoubtedly occur, to warn us, like spots upon the sun, that nothing is perfect, yet, to the eye that contemplates, on a wide scale, the results of vaccination, these are lost in the brilliancy of its general career. No where has it been more severely tried,—but no where has it come out of the trial more triumphant, than in the annals of your useful and excellent Charity.

GEORGE GREGORY, M.D.

8, *Upper John-street, Golden-square;*
June 3, 1824.

ART. II.—*Return of the Number of Recruits for the Army, inspected at Glasgow, from the 1st of January, 1817, to the 20th of June, 1823, divided into annual Periods, wherein the Number deemed fit for the Service are distinguished from those considered to be unfit; with a Specification of the Causes of Rejection.*

	1817	1818	1819	1820	1821	1822	To June 1823	Total
Deemed fit for the service	506	460	625	895	574	807	520	4387
Deemed unfit for the service	107	133	180	243	214	315	176	1368
Total number inspected	613	593	805	1138	788	1122	696	5755
Marks of punishment	0	2	7	7	10	7	1	34
General debility, or unhealthy appearance	18	18	11	11	0	32	11	101
Cutaneous diseases	1	2	3	12	0	5	6	29
Cicatrices of ulcers	8	2	1	1	9	8	4	33
Scrofula, or scrofulous appearances	8	6	14	10	17	17	6	76
Diseases of the eyes, or defect of vision	8	10	3	4	12	23	22	82
Deafness	0	2	1	0	1	2	1	7
Diseased teeth, including the loss of teeth	0	0	1	0	1	0	1	3
Polypus	0	0	0	0	0	4	2	6
Ill-formed chest, with either depressed or protruding sternum	5	4	20	14	26	24	15	108
Malformation of the spine	0	2	0	1	4	1	2	10
Fractures, dislocations, tumors, or malformations of either the superior or inferior extremity	27	42	56	58	52	58	37	330
Inguinal hernia, or disposition to hernia of both rings	0	0	0	0	0	3	1	4
——— of right side	0	0	2	5	0	8	3	18
——— of left side	1	0	0	2	6	2	0	11
Varicose Veins: of either legs, hams, or thighs, throughout the course of the vena, saphena, on both sides	1	4	13	16	2	3	3	42
Varicose Veins: Do. do. right leg, &c.	6	5	14	25	13	18	9	90
Varicose Veins: Do. do. left do.	10	13	18	18	19	22	17	117
Varicose Veins: of the spermatic processes of both sides	0	0	0	2	0	3	1	6
Varicose Veins: Do. do. right do.	0	0	1	1	1	0	0	3
Varicose Veins: Do. do. left do.	0	0	5	40	13	20	11	89
Ventral hernia	0	0	0	0	1	0	0	1
Enlargement of both rings	0	0	0	1	1	0	0	2
Do. right abdominal ring	0	0	2	6	0	0	2	10
Do. left do.	0	0	0	0	1	0	0	1
Diseased right testicle, either producing diminution or enlargement	1	2	0	2	0	4	1	10
Do. left do. do.	4	5	1	1	0	10	1	22
Enlarged gland of the groin, and unconnected with scrofula	1	7	1	0	7	5	6	27
Hydrocele	0	0	0	0	2	4	0	6
In-knee'd	0	0	0	1	9	4	8	22
Venereal disease	0	3	0	0	2	9	2	16
	99	129	174	238	209	296	173	1318

	1817	1818	1819	1820	1821	1822	1823	
Brought forward	99	129	174	238	209	296	173	1318
Tenia capitas	2	3	0	0	1	3	0	9
Fractured clavicle	0	0	1	0	1	0	0	2
Defect of speech	0	0	1	3	1	1	0	6
Loss of teeth	0	0	1	0	1	0	1	3
Imperforate urethra, and malformation in the orifice	0	0	0	0	0	2	0	2
An organic disease of the heart	1	0	0	0	0	0	0	1
Asthmatic	2	0	0	0	0	0	0	2
Bubonocele	1	0	0	0	0	0	0	1
Hare-lip	1	0	0	0	0	0	0	1
Fractured patella	1	1	0	0	0	2	0	4
Deformity of the face	0	0	1	0	0	0	0	1
Unable to march	0	0	1	0	0	0	0	1
Subject to mental derangement	0	0	0	1	0	0	0	1
Aneurismal enlargement of the carotid artery	0	0	0	1	0	0	0	1
Injuries of the head	0	0	0	0	1	5	0	6
Enlarged bursæ mucosæ	0	0	0	0	0	1	0	1
Ulcers on the trunk	0	0	0	0	0	1	0	1
Excrescences of the eyelids	0	0	0	0	0	1	0	1
Diseased viscera	0	0	0	0	0	1	0	1
Diseased bones	0	0	0	0	0	1	0	1
Ulcerated throat	0	0	0	0	0	1	0	1
Injuries of the abdominal muscles, and diseased appearances of the abdomen	0	0	1	0	0	1	1	3
Total	107	133	180	243	214	315	176	1368

Remarks.

The accompanying Return I was, in the first instance, induced to compile merely from motives of curiosity as to the number of men enlisted during the last seven years in this district alone, as also the number of men rejected since, which would afford an exact total of the men that entered the service; but, on looking over the diseases for which these men were rejected, I was struck with some peculiarities amongst them, which I have never seen brought to public notice; neither had I a prior opportunity of observing. This influenced me to form a class of the different causes of rejection, which I have put under as few heads as possible; but regret, in so doing, that it escaped my notice, in the annexed Return, to pay more attention to the nosological arrangement at present established for the use of the army.

In making out this list of diseases for which so many men have been rejected, there has been some difficulty in placing them in so small a compass, owing to some unfixed rule in the registry: for instance, *unable to march* appears in the return, the registry affording no cause as to the inability; whereas, if it originated in flat feet, &c., it might have been included under the heads of Diseases of the Extremities, &c. With regard to diseased testicles, varicose veins of the legs and spermatic processes, the want of discrimination as to which side the disease

was to be ascribed, caused some confusion: however, where doubt has arisen, I have divided them to either extremity.

By the Return, the number of men rejected for varicose veins makes a prominent part of the total; but the singularity exists in the frequency of this disease in the left lower extremity to that of the right: in the vein saphina alone it is as 117 to 90, even allowing an equal number to each leg of these cases, where, as I before mentioned, any doubts existed in the registry. This difference is extremely striking in the spermatic processes, where the disproportion is in favour of the left in the ratio of 89 to 3. This is again supported by the frequency of diseased testicles being as 22 to 10; and which may be accounted for, in my opinion, as being produced by the same cause as that producing the varix in the vessels returning the blood from the testicle into the circulating fluid.

The frequency of enlargement of the right abdominal ring, and, of course, the facilitating the descent of the intestine, is another circumstance worthy of remark. The cause, I am aware, is attributed to the greater exertions to which we are, in general, more accustomed to make with the right extremities than the left. This, however, is in contradiction to the general rule, which lays down that the more exertion the living fibres of the muscles are accustomed to, the greater is their power, and, of course, less likelihood of their texture being relaxed.

The causes why varicose veins of the left side are more frequent than that of the right, I conceive anatomy points out to us; for, if we reflect that the inferior cava is principally formed by the junction of the two common iliac veins, and that its situation is upon the right side of the bodies of the vertebræ, and of course more to the right than the descending aorta; and that the left iliac vein has to traverse a much greater extent of pelvis to form a junction with the right, and, in most instances, that the vein has to pass under the right iliac artery for this purpose,—may not the action of such a vessel as the common iliac artery, preventing the return of blood from the lower extremity, be a sufficient cause to produce a distention of the coats of the vessel, and subsequent varix? If so, the veins of the chord are, of course, subject to the same inconvenience, as well as the vena saphena, which, although no doubt effected by any distention of the femoral vein, has, prior to emptying itself into that vessel, to quit the superficial course which it had up the thigh,—namely, between the integuments and sartorius muscle, and penetrate that fascia now known by the name of cribriform fascia, and which has been, in some instances, said to be the seat of stricture in cases of hernia.

MEDICAL AND PHYSICAL INTELLIGENCE.

MORBID ANATOMY.

1. *Rupture of the Heart, and Perforation of the Stomach.*—Dr. Andral, jun., at a late meeting of the Academy of Medicine, read the case of a person who died of the above disease: he had suffered a long time from indigestion, and died suddenly from the effect of strong emotions. The pericardium contained a great quantity of blood; the posterior part of the left ventricle presented five oblong perforations, the greatest diameter of which were in the direction of the longitudinal axis of the heart. The heart was not softened in any degree. The stomach showed traces of chronic inflammation, and exhibited, about the centre of its posterior surface, a large circular opening, with soft and round edges. There was no effusion in the peritoneum.—(*Revue Med.* Mars.)

2. *Organic Alterations in the Bronchiæ.*—Dr. Andral, jun., in a Memoir upon this subject, describes three species of alteration to which the bronchiæ are liable,—dilatation, narrowing, and obliteration. Five cases are given of the dilatation of this organ, and from which the following conclusions are drawn:—

1. This dilatation is always connected with the existence of chronic catarrh. 2. There exists three varieties of dilatation: in the first variety, one or more of the bronchiæ present throughout their extent an augmentation of their capacity, more or less considerable; sometimes one branch only is affected, sometimes those of the whole lobe; and the parietes of the canal are often thicker than natural. There is a sort of hypertrophy of the mucous membranes, and even of the cartilaginous tissue itself: if this alteration has not extended far, it is not easily recognized during life. The second variety consists of a swelling of the bronchial canal in one point, of a greater or less extent, with a thickening of its sides: the diagnostic is more or less easy, according to the situation and extent of the enlargement. The third variety is when one of the bronchia is dilated by intervals, presenting a series of successive swellings and contractions: here the sides of the canal, instead of being thickened, are, on the contrary, remarkably thin. It is impossible to establish the diagnostic in this instance.

Contraction of the bronchiæ is a less common alteration than their dilatation, and M. Andral gives but three instances of it. Like the latter complaint, the contraction may be either general or partial. It is not always occasioned by chronic inflammation, but may be the result of mechanic pressure, from tumors, &c. It may exist without producing any phenomena; at others, it produces remarkable symptoms, but which are also common to other affections. In two cases mentioned by M. Andral, the contraction was occasioned by the thickening of the sides of the canal; in the third, the contracted bronchiæ was comprised in an enormous mass of melanosis.

The obliteration of the bronchiæ is an extremely rare occurrence.

M. Andral possesses but one case in which it occurred. The upper lobe of the lung was changed into melanosis; the principal bronchia of this lobe, and its three or four chief divisions, were sound; but beyond that there was no trace of bronchial canals.—(*Archives Generales de Medecine.*)

PHYSIOLOGY.

3. *Exhalation of Water in the Act of Respiration.*—Dr. Paoli and Professor Regnioli have had an opportunity of ascertaining the disputed point, whether the water exhaled in the act of respiration came from the lungs, or was owing to the exhalation formed in the aërial and nasal passages, as has been asserted by M. Magendie. Theresa A— had undergone the operation of tracheotomy, and it was observed that the air passing from the wound in the trachea, through a canula, became visible by the condensation of the aqueous vapour, at 4° of Reaumur. A glass was applied four inches distant from this canula, and was covered with moisture.

M. Paoli enters into long discussions on the hypotheses usually advanced on this subject, and comes to the following conclusions:—1st. That the aqueous vapour which accompanies the act of breathing, is formed from the whole surface of the respiratory organs. 2d. That it takes place from simple exhalation, from the mucous membrane investing these organs. 3d. That all the oxygen gas consumed in respiration is employed in the production of the carbonic acid. 4th. That the formation of this acid begins in the lungs, goes on in the arteries and in the circulation, is brought to the lungs with the venous blood; and that by this means the animal heat, produced by the combination of oxygen with the carbon of the blood, is extended to the whole animal economy.

PATHOLOGY.

4. *On the Cholera Morbus of India.*—M. Moreau de Jonnes who has been occupied during the last five years with researches upon the subject of this disease, has come to the following conclusions respecting it:—

1st. That, from the year 1817 to 1823, it has travelled from the Mollucca Islands to the coasts of Syria,—from the mouth of the Volga, in the Caspian Sea, to the Isles of France and Bourbon; the extreme points of its ravages being 1340 leagues asunder north and south, and 1900 leagues from east to west.

2d. It does not depend upon individual predisposition, since it attacks equally all ages, both sexes, all kinds of temperaments, and different races of mankind.

3d. It does not depend upon the extremes of atmospheric temperature, since its ravages are equally severe at all seasons.

4th. It is not the effect of humidity, or of low and inundated situations; for it has established itself, with equal violence, in the mountains of Nepaul, in the elevated spots of the Isle of France, in the sands of Arabia, the deserts of Diarbekir, and the stappes of Tartary.

5th. It is not produced by marsh miasmata, stagnant water, or other causes of this kind; because it is found in situations where none of these causes exist.

6th. It is not dependent upon any vitiated state of the atmosphere; for it has shown itself with equal malignancy at the opposite extremities of Asia, during a period of seven years.

7th. It is not the consequence of poor or defective nourishment, such as the fish of the Ganges, or the rice of Oude; for it attacks those whose diet is totally different.

8th. It is not transported by the winds, as has been supposed, for many reasons, but especially as it spreads often in a direction contrary to the prevailing currents of air.

9th. These negative propositions lead to the conclusion, that this disease has no connexion with cholera morbus, properly so called; but that it is a pestilential malady, propagated from person to person, but following laws of its own, not yet perfectly known: and, finally, that it has spread from individual to individual, by navigation, by following the march of armies, or of the native pilgrims, or attending upon vessels of war and commerce; crossing the sea with navigators, the desert with caravans, and chains of mountains with travellers.

THERAPEUTICS.

5. *Utility of Pulvis Antimonialis.*—We have been favoured with a communication relative to the powers of this remedy, by Mr. F. Moore, many years chemical operator at Apothecaries' Hall. The following are extracts from his letter:—

"Within the last thirty years,—I mean during the time that I was chemical operator to the Society of Apothecaries,—I not only superintended, but have sweated myself in the preparation of very large quantities of the pulvis antimonialis, as directed in the London Pharmacopœia. Being a very favourite medicine of mine, I have also given a great deal of it; and have always found that, either when taken alone or conjointly with other medicines, it almost constantly either nauseates, vomits, sweats, or acts on the bowels, producing these effects with a dose of from two to five grains: this has been my experience invariably. As operator, I constantly had the opportunity of hearing of it through the very first practitioners; and, during the last long war, the Company had large orders frequently from the different government hospitals: for instance, from Haslar, often for four hundred ounces at a time. Surely, if this medicine were then so much admired and in demand, (and I believe is now exactly, if not better, prepared,) it must still be capable of producing all the good effects expected from it as a medicine, without giving drachm doses. The inference I would draw, then, is, that both Drs. Elliotson and F. Hawkins have not employed the same pulvis antimonialis that I have alluded to. In my time I have heard of extraordinary doses of tartar emetic being given to vomit,—perhaps, from seven to ten grains; but no practitioner, using what is made at the Hall, would, I should think, order more than from two to five grains.

SURGERY.

6. *Case of Diplopia, cured by a Surgical Operation.*—Dr. QUADRI, of Naples, relates the case of a man attacked with a species of double vision. After having used all the most energetic remedies in vain, he conceived that the disease was owing to some affection of the optic nerves, and ordered the patient to take Richter's pills. The patient, however, became worse; and, on examining the eye, the iris appeared sound, the movements of the pupil regular and rapid; there was no spectra, or small objects, complained of as floating before the eyes, so common in cases where the nerves are affected. Dr. Quadri conceived the disease to arise from pressure, made by a superabundant quantity of cellular substance at the inner angle of the right caruncle, which threw the eye out of the centre of the orbit; and he was confirmed in that opinion upon finding that the diplopia disappeared when the eye was carried inwards or upwards. The author, therefore, laid open the right caruncle, and, by means of a small pair of forceps, took away three small pieces of cellular substance; the wound healed by the first intention, and the patient was relieved.

This encouraged M. Quadri to repeat the operation some few days after, in the same manner, and to the same extent. After this second operation, the wound was closed with a point of suture and adhesive plaster. The inflammation after this operation was more considerable, but was relieved by leeches, and the wound healed in a few days. The disease was quite cured.

M. Quadri conceives that the inflammation which took place after the last operation, increased the density of the cellular substance, so as to destroy the tendency to grow, which it had before evinced.—(*Osserv. Mediche,* March.)

CHEMISTRY.

7. *Artificial Chalybeate Water.*—If a few pieces of silver coin (says Dr. HARE,) be alternated with pieces of sheet iron, on placing the pile in water, it soon acquires a chalybeate taste and a yellowish hue, and in twenty-four hours flocks of oxide of iron appear. Hence, by replenishing with water a vessel in which such a pile is placed, after each draught, we may obtain a competent substitute for a chalybeate spring.—(*Journal of Science.*)

8. *Liquefaction of Sulphureous Acid.*—M. BUSSY is stated to have obtained the above acid liquid, and free from water, by causing it to pass, in its gaseous state, through a tube containing fused chloride of calcium, and afterwards into a flask surrounded by a mixture of ice and salt, where it completely liquefies, and remains in a liquid state under atmospheric pressure, at the temperature of 0°. It is a colourless, transparent, and very volatile liquid, of a specific gravity = 1.45. It boils at about 10° centigrade below 0 = 14° Fahrenheit; but, in consequence of the cold produced by the evaporation of the portion which is volatilized, the residue remains liquid, being reduced to a temperature much below its boiling point. It occasions intense cold, and rapidly

evaporates when dropped upon the hand. Poured into water at common temperatures, one portion is dissolved and another volatilized; but, as the solution approaches to saturation, the acid collects in drops at the bottom of the vessel, like an oil heavier than water. If in this state it be touched by the extremity of a glass tube, it passes into vapour, occasioning ebullition, and ice forms upon the surface of the water.

The bulb of a thermometer enveloped in cotton, and dipped into the liquid acid, falls spontaneously, when exposed to the air, to — 57°, (= — 70° Fahr.) the atmosphere being at 50° F. In the vacuum of the air-pump, a cold of — 68° (= — 90° F.) is thus easily obtained. Mercury, therefore, is easily frozen by the aid of this acid, simply by dipping the bulb of a mercurial thermometer, surrounded with cotton, into it, and agitating the air with it. The experiment succeeds better when a little mercury is put into a cup, with a small quantity of sulphureous acid upon it, and the whole put under the exhausted receiver. By the evacuation of the acid in vacuo, M. Bussy has frozen alcohol of a strength below 33°, (of a specific gravity below .852 at 55_0.) By passing chlorine and ammonia through tubes cooled by the evaporation of sulphureous acid, M. B. liquefied those gases; and, by a similar method, cyanogen was obtained in the form of a crystallized solid.—(*Annales de Chimie et Physique*, Mai.)

9. *Test of the Alteration of Solutions by the Contact of Air.*—M. Becquerel remarks, that, if iron be dissolved in nitric acid, and the solution filtered, and two plates of platina, connected with the two extremities of the wire of a galvanoscope, be immersed into the solution, and if one plate be withdrawn, and then re-introduced into the solution, it will produce an electric current passing from this plate to the other; and generally the plate withdrawn from the solution and re-introduced, becomes positively electrical.

The nitrates of copper and lead give similar results; but they do not retain this power, and in the course of a few hours no effects of this kind are observable. Nitrate of zinc does not operate in this manner. Suspecting that the effect was due to the action of air on the film of solution which adheres to the withdrawn plate, the experiment was made in an atmosphere of hydrogen; and then no such results were obtained. M. Becquerel, therefore, attributes the effect to the alteration induced by the air on the portion of solution withdrawn with the plate, and which, when the plate is re-immersed, being dissimilar to the fluid that has not been exposed, determines the current of electricity. The effect of the air, he considers, is probably to convert such portion of deutoxide of azote and proto-nitrate as may have been formed by the action of nitric acid on the metal, into nitrous acid and deuto-nitrate; and that, when this has taken place with all the portions of the solution, the power of producing electrical currents ceases.—(*Ann. de Chim.* xxv. 413.)

MISCELLANEOUS.

10. *Society of Physicians of the United Kingdom; established in London, June* 17, 1824.—Although medicine has been studied from a very early period, and considerable genius and learning have been em-

ployed in its cultivation, yet such is the extreme complication and difficulty of the subject, that its present state still admits of great improvement; to which, perhaps, nothing would more effectually contribute than the intimate union and active co-operation of its professors.

Much may certainly be accomplished by united effort, which individual exertion, however well directed, is unable to effect. While, at the same time, it cannot be doubted that, whatever contributes to the advancement of medical science, must, by increasing its usefulness, add to the dignity of the profession.

Under these impressions, and considering that a great majority of the regular graduates in physic of this country are at present in an isolated state, several physicians practising in London have been induced to associate, and to invite the zealous co-operation, throughout the kingdom, of that part of the profession to which they belong; with a confident hope of facilitating, by these means, the accomplishment of the laudable purposes just mentioned.

It is, therefore, proposed that a Society be established, having principally in view the following objects:—1. The reception and discussion of subjects connected in any manner with the science of medicine. 2. The combined investigation of such points, whether theoretical or practical, as are at present obscure or uncertain, and to the elucidation of which individual labour has hitherto appeared inadequate. 3. The publication of papers furnished by members of the Society, or of those which may be transmitted to them by the profession at large. 4. And, in general, the effecting of whatever may tend to improve the science of medicine, or to advance the interests and dignity of its professors, the regularly educated graduates in physic of the Universities of the United Kingdom.

At a meeting held June the 17th, 1824, at the house of Dr. Shearman, —present, Doctors Temple, Cleverly, Birkbeck, Uwins, Clutterbuck, Hancock, Shearman, Copland, Tweedie, and Roberts, it was resolved unanimously:—

1. That a Society of Physicians be established, for the purposes above stated.

2. That it be called THE SOCIETY OF PHYSICIANS OF THE UNITED KINGDOM.

3. That the Society consist of such persons only as have actually prosecuted the study of medicine in a University, for the period prescribed by its regulations, and who, having subsequently submitted to the usual tests and examinations, have thereby obtained the degree of Bachelor or Doctor of Physic. But members of the London College, whether Fellows or Licentiates, admitted prior to the year 1800, are eligible.

4. That no person be a member of this Society, who is engaged in the actual practice of surgery, pharmacy, or midwifery.

5. That a committee be appointed for the purposes of giving the necessary publicity to these transactions; of receiving communications from the profession; of preparing a system of laws and regulations for the government of the Society; and of performing, in general, whatever may be conducive to its interests, prior to the first general meeting; to which they are to report proceedings, and resign their functions.

6. That the following gentlemen be members of this committee, with the power of making such additions to their number as they may judge convenient:—Drs. Temple, Cleverly, Birkbeck, Uwins, and Clutterbuck.

7. That the first general meeting take place at the house of Dr. Birkbeck, at half-past eight in the evening of the second Thursday in October next. (Signed)

C. J. ROBERTS, *Sec. pro temp.*

Communications on the subject of the Society, to be addressed to Dr. Roberts, No. 20, Earl-street, Blackfriars.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

*** *It having been hinted to us that gentlemen, sending copies of their Works, prefer having their titles given at length, it is our intention, in future, to comply with this suggestion: but it is to be observed, that no books can be entered on this List except those sent to us for the purpose;—finding, in the lists hitherto transmitted, that the names of works have frequently been given as published, which have not appeared for weeks, or even months after.*

Pathological Views of the Structure, Functions, and Disorders of the Stomach and Alimentary Organs of the Human Body; with Observations on the Qualities and Effects of Food and Fermented Liquors, and on the Influence of Climate and local Situation. By THOMAS HARE, F.L.S. F.H.S. Fellow of the Royal College of Surgeons in London, &c. Second Edition.—Pp. 368. London, 1824.

Inductions Physiologiques, Pathologiques, et Therapeutiques; ou Elemens généraux d'Anthropologie et de Medecine, deduits des Faits. Précedés d'un Précis historique des Doctrines Anthropologiques et Medicales. Par J. F. COFFIN.—Pp. 175. Paris, 1822.

A Voyage to India; containing Reflections on a Voyage to Madras and Bengal, in 1821, in the Ship Lomach; Instructions for the Preservation of Health in Indian Climates; and Hints to Surgeons and Owners of Private Trading Ships. By JAMES WALLACE, Surgeon of the Lomach.—Pp. 166. London, 1824.

Competitio ad Aggregationem Jussu Regis optimi et ex Mandato Summi Regiæ Universitatis Magistri instituta 1823. An in Curanda Oculi Suffusione (vulgo Cataracte), Lentis Crystallinæ Extractio hujus Depressione præstantior? Theses, quas Deo favente, in saluberrima Facultate medica Parisiensi, præsentibus competitionis judicibus, publicis competitorum disputationibus subjiciet et dilucidare conabitur die 26 Februarii, anno 1824. Auctor J. CLOQUET.—Pp. 9. Parisiis, 1824.

Consultations et Observations de Médecine de feu C. L. DUMAS, Recteur de l'Academie de Montpelier, Doyen et Professeur d'Anatomie et de Physiologie de la Faculté de Medecine de la même Ville; Professeur de Clinique de perfectionnement appliquée aux Maladies Chroniques; et Medecin de l'Hospice établi pour le Traitement de ses Maladies; Correspondant de l'Institut de France, &c. Publiées par le Dr. ROUZET, Membre adjoint de l'Academie Royale de Médecine, &c. &c.—Pp. 498. Paris, 1824.

Melanges de Chirurgie Etrangère, par une Societé de Chirurgiens de Genève, composée de MM. J. P. MAUNOIR, C. T. MAUNOIR, Professeurs F. MAYOR, C. G. PESCHIER, J. C. MORIN, J. P. DUPIN, F. OLIVET, Docteurs en Chirurgie.—Genève et Paris, 1824.

METEOROLOGICAL JOURNAL,

From June 20, to July 19, 1824.

By Messrs. WILLIAM HARRIS and Co. 50, Holborn, London.

	MOON.	Rain gauge	THERM. 9 A.M.	THERM. MAX.	THERM. MIN.	BAROM. 9 A.M.	BAROM. 10 P.M.	DE LUC'S HYG. 9 A.M.	DE LUC'S HYG. 10 P.M.	WIND. 9 A.M.	WIND. 10 P.M.	ATMOSPHERIC VARIATIONS. 9 A.M.	2 P.M.	10 P.M.
Jun.														
20		30.	52	60	53	29.30	29.30	74	89	SW	SSW	Fine	Rain	Rain
21			57	63	58	29.32	29.40	75	80	SW	W	Rain	Fine	Fine
22			60	68	59	29.43	29.40	65	75	WSW	SSW	Fine		
23		.70	60	60	55	29.24	29.34	85	90	SE	NE	Rain	Rain	Rain
24			57	57	50	29.33	29.50	90	90	N	W	Cloud.		
25			55	58	52	29.62	29.80	85	70	W	NW		Cloud.	Cloud.
26	●		60	65	60	29.94	30.00	65	65	W	WSW	Fine	Fine	Fine
27			63	68	58	29.97	29.88	60	62	SE	ESE			
28			58	69	59	29.90	29.84	67	65	WSW	SSW	Rain		
29		.25	63	72	65	29.65	29.70	65	66	SSE	NW			
30			65	69	57	29.83	29.82	67	65	WSW	WSW	Fine		
July														
1			64	66	55	29.82	29.70	65	70	W	SW		Fair	Rain
2		.43	57	68	58	29.50	29.52	80	79	SW	SW	Rain	Sho'ry	
3	☽		63	68	55	29.57	29.53	65	70	W	NW	Fine		Cloud.
4			60	67	56	29.65	29.86	68	69	W	NW			Fine
5			63	66	54	29.92	29.90	63	69	WSW	SW		Fair	Cloud.
6		17	57	61	56	29.84	29.80	70	74	SE	SW	Rain	Rain	
7			57	67	54	29.83	29.83	73	70	SW	W	Cloud.		
8			57	69	58	29.95	29.97	68	70	WSW	SW	Fair	Fine	Fine
9			60	70	57	29.92	29.85	70	70	SSW	NNW	Cloud.	Sho'ry	
10			65	71	57	29.87	29.96	65	64	WNW	NW	Fine	Fine	
11	○		65	73	58	30.07	30.00	60	64	W	W			
12			65	75	55	30.07	29.95	62	62	SW	WSW	Fair		Cloud.
13			67	78	60	30.01	30.00	65	60	W	SSW	Fine	Fine	Fine
14			75	78	60	29.90	29.80	55	65	E	E		Sho'ry	Th.Sto
15		.70	63	75	60	29.86	30.00	73	70	W	W	Cloud.	Fine	Fine
16			67	73	57	30.04	30.04	66	64	W	W	Fine	Sho'ry	Cloud.
17			66	70	57	30.18	30.20	65	64	ENE	E		Fine	Fine
18			60	69	56	30.20	30.35	60	62	ENE	NE			
19	☾		62	69	58	30.40	30.40	58	60	NW	N			

The quantity of rain fallen in the month of June, was 2 inches and 80.100ths.

NOTICE TO CORRESPONDENTS.

Communications have been received from Dr. VANDEBURGH, Dr. BALFOUR, Mr. HARDY, Mr. SANDERS, *&c. &c. which will appear in our ensuing Number.*

THE LONDON

Medical and Physical Journal.

Nº 3 OF VOL. LII.] SEPTEMBER, 1824. [Nº 307.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,

SELECT OBSERVATIONS, &c.

ART. I.—*Report of Ocular Diseases, at the General Hospital, Fort Pitt, from 21st December, 1822, to 20th December, 1823.* By GEORGE R. MELIN, Assistant Surgeon to the Forces.

THE greater number of ophthalmic cases at this hospital, in 1822, were principally admitted from the 13th and 44th Regiments, which were quartered here for some time previous to embarking for India, and were generally recent attacks. This will also explain the reason of the large proportion of men discharged to their regiments, in comparison with former years, when the diseases treated were generally of long standing, and amongst men who were invalided on account of ophthalmia; in which case, the surgeon in charge here cannot well send a man back to his regiment, unless the eyes are restored to a perfectly healthy and natural state; for, if there was the most trifling defect in either eye, he would be liable to be rejected by his surgeon, on joining the regiment.

The cause of the prevalence of the disease in these two regiments, I could never satisfactorily discover: it had existed in both corps for some time, and their respective surgeons were unable to account for it, although they used every means in their power to check its course, and prevent its recurrence. The men were certainly a good deal exposed to changes of atmosphere and temperature, during drill and on night-duty; and many of the cases, especially among the recruits, no doubt were occasioned by this. But then the other troops in the garrison were nearly equally exposed, and did not suffer in the same manner. There was, therefore, too much reason to fear that many of the men, unwilling to embark, had adopted some secret method of producing the inflammation; and in two cases I detected it, but could not succeed in inducing either of the men to disclose the nature of the imposition. I am further confirmed in my suspicion, by Dr. Jones, of the 44th, having told me, since his return

to this country, that not a case of ophthalmia occurred during the voyage.

Ophthalmia.—In treating of this disease, and detailing the practice I pursued, it will only be requisite to consider it under its acute and chronic forms, without any distinct reference to whether it was accompanied by a purulent secretion or not, as the treatment was the same, and none of the cases were of that severe form commonly called Egyptian.

For some time before I was placed in charge of the ophthalmic division of this establishment, I considered that acute ophthalmia, in general, was treated too actively, and that a mere local inflammation could not require such extensive general depletion as was usually practised and recommended; and, from having witnessed the good effects of a solution of lunar caustic in some cases of gonorrhœa, both in allaying the pain and suppressing the discharge, I was determined, the first opportunity, to try its effects in inflammation of the conjunctiva, a similar membrane to that lining the urethra, and where the only danger attending its use in the latter was not to be apprehended. This opportunity was afforded me shortly after my arrival here; and the first acute cases which were admitted, I pointed out to Dr. Forbes, under whose observation I carried my views into execution, and was soon gratified by their being attended with complete success. The strength of the solution I employed was four grains to the ounce of distilled water, which I dropped into the eyes twice a-day: it excited pain and a sensation of roughness, with an increased flow of tears, for about ten or twenty minutes; after which the eyes felt much relieved, and in a few days the cure was effected.

Since that period I have treated nearly *three hundred cases of acute ophthalmia*, some of them of a severe nature, in a similar manner, without either local or general bleeding, and I have had ample opportunities of proving its efficacy. One very material advantage attending this mode of treatment is, that the inflammation is subdued without leaving any chronic disease, either in the eye-balls or lids; whereas, by the antiphlogistic plan, (though the active inflammation be removed, and the eye saved,) it frequently leaves the vessels in such a debilitated state, that you have a more difficult and tedious disease to contend with, and one which frequently renders vision imperfect. I have received, from several of my professional friends, to whom I communicated the plan of treatment, very satisfactory accounts of its efficacy in their practice; and from Mr. Beard, of the Artillery, who has had much experience in ophthalmic complaints, and who saw many of my cases, I some time ago received a letter, from which the following is an extract:—

"I have used the caustic solution in about thirty cases of acute ophthalmia, and, with the exception of two, (and in those exceptions I was not my own master,) without any auxiliary aid from bleeding, purging, or external application, or even abstraction of the stimuli of light, heat, or meat diet, &c. In the excepted cases, I was ordered to bleed, and pursue otherwise the antiphlogistic plan, on account of the pain over the orbit appearing to have been increased by the solution. In these two cases, the bleeding did immediately remove the pain in the orbit, but the conjunctival inflammation was not at all subdued; and the caustic was again tried, and almost instantly succeeded. I must, in addition, state, that I was not at all sure these two cases were purely and fairly adapted to the caustic treatment. In one of the two men, I suspected he either falsely represented his case, or wilfully aggravated it. In the other, I had reason to believe the iris was concerned. Altogether, I can aver that my success in the caustic plan has been most constant and decided. I have observed that the inflammation of the conjunctiva has not only been rapidly subdued, but that the cure has been remarkably perfect, inasmuch as no elongated or debilitated vessels were left."

In the above extract, there are two circumstances that deserve particular notice: first, it points out the necessity of discriminating between deep-seated and superficial inflammation, and the case alluded to is not the only one in which I have known a similar error to have been committed; and, secondly, the advantage of combining depletion with the use of the solution, in cases where there is severe internal pain. In such cases, I would certainly recommend cupping on the temples; or, if there should exist any increased action of the arterial system, one full bleeding from the arm. But, in the conjunctival inflammation which I have met with here, I have had no reason to employ either; and I am inclined to think that, in the ophthalmia of this country, it can very seldom be required, if treated in its early stage in the manner I have adopted.

This mode of treatment is peculiarly, I think, adapted for regimental practice, as the surgeon sees the disease on its first appearance; and the advantage of employing it thus early is exemplified in the accompanying case, No. 3. In another case, the right eye became affected, while the left was under treatment; and the early use of the solution completely arrested its further progress.

In the severe purulent ophthalmia usually met with in the Mediterranean and warm climates, I should expect that its early exhibition would be attended with great benefit, from the peculiar power it possesses of quickly suppressing the purulent secretion in the ophthalmia of infants, and in the milder forms

in which I have seen the disease. Not that I wish to recommend the antiphlogistic remedies to be entirely relinquished, but employed with moderation, in conjunction with the local treatment, where the state of the pulse, or severity of the pain, points out its necessity; as I am convinced, from the many cases of loss of eyes that I have met with and heard of, in which general and local bleeding were carried to a very great extent, that they alone will not save the organ; but, on the contrary, in many of the cases, I am certain that the great abstraction of blood, by reducing the system too low, left the vessels of the part so weak, that they were unable to recover or exert sufficient action to resist the destructive effects of the disease.

The accompanying cases so fully show the nature of the inflammation and the mode of treatment, that I have no more to add on the subject, than to point out the case of William Sparks (No. 4), as a striking illustration, in the same individual, of the difference between the severe antiphlogistic plan of treatment and that which I pursued.

Chronic Ophthalmia.—Of this complaint I shall not have occasion to say much, as the day is gone by when the profession was entrapped, by bold and unfounded pretensions to a superior mode of treatment, into an abandonment of the true principles of the science. The knife and scissars are now thrown aside; and even bluestone is, I believe, seldom used with that severity it formerly was. For this improvement and return to reason, the public are indebted to the judgment and persevering exertions of the Medical Board, and of some of its officers.

My treatment has consisted principally in the use of solutions of caustic, varying in strength from four to six grains to the ounce, according to the state of the granulations. If they were very vascular, I employed the weak; if pale and indolent, the stronger; and, in a few cases, where they were remarkably pallid, flabby, and indolent, I employed more active stimulants, —such as solutions of oxymuriate of mercury in the vinum opii. These applications were dropped into the eyes twice a-day, and thus exerted their influence on the opacity and vascularity of the cornea, as well as on the granulations, and the improvement on both was progressive.

Under these gentle remedies, the absorption of the granulations gradually took place, and the vessels of the conjunctiva were restored to a healthy state. I never found it necessary to employ any escharotic; and I am certain that the mild treatment which I have detailed, is attended with more rapid and general benefit and safety to the organ, than that of producing a deep slough, by bluestone or other escharotics, as formerly practised. Long before the granulations or villosity of the lids were removed, the vascularity of the cornea subsided; and, as

soon as the lids became smooth, I usually laid aside the solution of the nitras argenti, and, for the remaining opacity of the cornea, I used solutions of the oxymurias hydrargyri, from one to three grains to the ounce of the vinum opii, and other stimulants, according to the susceptibility of the eye to their action; but, when the solution of caustic agreed with the eyes, and the opacity of cornea yielded to its use, I of course continued it, as will be seen by the two accompanying cases.

In a few cases, I found considerable benefit from an alterative course of mercury; but in this and other constitutional treatment, the practitioner must be regulated by the general state of health of the patient; and his success in many of these chronic cases will, in a great measure, depend on the attention and skill which he displays in restoring the system to a healthy state.

This comprises so many and such important points, that it cannot be expected I should enter on them; and I have therefore only given that local treatment, which, combined with attention to the general state of health of the patient, has proved most beneficial in this establishment.

I annex three cases of chronic ophthalmia, which will show the beneficial effects of mild treatment, and that escharotics are not requisite for the cure of granulations.

Cases of Acute Ophthalmia. CASE I.—William Wood, 57th Regiment, æt. thirty; admitted 15th March, 1822. Labouring under acute inflammation of both eyes, accompanied with pain, sensation of sand in the eyes, great intolerance of light, and lachrymation, as well as a puriform secretion which was lodged between the inferior lids and eyeballs; the conjunctiva sclerotica extremely vascular; the vessels of a pinkish-red colour, and running at right angles from each other, forming the appearance of a fine net-work over the eyeball. The conjunctiva slightly elevated around the cornea; which is, however, free from vascularity or opacity. The lids extremely vascular, and slightly villous. This attack came on five days ago, while on board the Chapman transport, and gradually increased to the present time.—Instillat sol. argent. nitrat. gr. iv. ad aquæ ℥j.; bis in die amb. oculis. Low diet.

16th.—The pain and sensation of sand considerably abated, and the vascularity diminished. No appearance of chemosis this morning. Bowels rather confined.—Cont. ut antea. Low diet.

17th.—Vascularity diminishing rapidly; no appearance of puriform matter, and all sensation of sand or pain entirely subsided.—Cont. solutio. Low diet.

19th.—Vascularity of the eyeball continues to decline fast; all lachrymation and intolerance of light have ceased; and, to use his own words, he feels the eyes stronger than they have been these two years back.—Cont. solutio. Half diet.

20th.—Vascularity of the eyeballs almost entirely subsided, as well as that of the lids, which have also lost all appearance of villosity. Bowels regular.—Cont. solutio. Half diet.

23d.—Discharged cured. Both eyes in a natural state.

Case II.—Richard Moore, 36th Regiment, æt. forty-five; admitted 19th March, 1822. Was admitted last night, affected with acute ophthalmia of both eyes, attended with great pain, sensation of sand, intolerance of light, and a great discharge of thick, white, puriform matter; the conjunctiva sclerotica so very vascular, that scarcely a white spot could be discovered, and some degree of chemosis around the cornea; the lids slightly villous, and very vascular. The inflammation is merely local, and there is no general excitement of the system. Instillat solutio arg. nit. gr. iv. ad aquæ ℥j. Low diet.

21st.—Pain in the eyes has entirely subsided; the vascularity diminished, and the chemosis subsided. Complains of only a slight sensation of sand.—Cont. ut antea. Low diet.

23d.—Feels the eyes free from pain or sensation of sand; intolerance of light and lachrymation considerably diminished, as also the puriform discharge and vascularity of the conjunctiva.—Cont. solutio. Half diet.

27th.—Intolerance of light and lachrymation entirely subsided, and vascularity diminishing daily; bowels regular.—Cont. sol. Half diet.

30th.—Has no complaints now, except some slight vascularity of the conjunctiva, and a little puriform discharge.—Cont. sol. Half diet.

April 3d.—Has no puriform discharge, and the vascularity has subsided.—Cont. solutio. Half diet.

7th.—Discharged cured.

Case III.—Charles Hole, 1st Royal Dragoons, æt. twenty-five; admitted 29th March, 1822, with acute inflammation of the left eye, attended with intolerance of light, lachrymation, pain, and sensation of sand in the eye; the conjunctiva sclerotica extremely vascular; the vessels of a bright red colour, running at right angles from each other, and forming the appearance of a net-work over the ball, except immediately around the cornea, where they form a circle of radiated minute vessels, lost in its circumference. Was a patient in No. 7 ward when he was first attacked with this inflammation, at about five o'clock yesterday morning, by a sensation in the organ as if something had been blown into it.—Low diet. Instillat solutio argent. nitrat. gr. iv. ad aquæ ℥j. bis in die oculo sinist.

30th.—Vascularity of eyeball considerably diminished; the pain entirely subsided, and the lachrymation and intolerance of light nearly so; bowels regular.—Cont. solutio. Low diet.

April 2d.—Intolerance of light and lachrymation entirely subsided, and the vascularity nearly so.—Cont. ut antea. Half diet.

4th.—Discharged cured.

Case IV.—William Sparks, 13th Foot, æt. twenty-nine; admitted 31st October, 1822. Affected with pain in both eyes, accompanied by great intolerance of light, lachrymation, and puriform discharge; the conjunctiva extremely vascular, and the lids villous: the complaint more severe in the right eye than in the left. This attack came on three days ago, and was occasioned by a severe wetting received during a review; had only joined his regiment three weeks, from the General Hospital at Dublin, where he was confined for eight months with severe ophthalmia; for which, he states, he was bled from the arms twenty-seven times, and that at each time he never lost less than two pounds,

often more; fourteen of which bleedings took place in the first fortnight after his admission. He also states, that there were thirty-five blisters applied to the whole of his head; and, he is certain, upwards of fifty to his neck, back, and behind the ears. Bluestone was repeatedly applied, and frequently occasioned considerable swelling of the lids, and pain; and it was often used immediately after the large bleedings. He underwent two full courses of mercury. Some drops were employed, but he cannot tell what they were.—Instillatur solutio argent. nitrat. gr. iv. ad aquæ ℥j. amb. oculis bis in die. Low diet.

November 1st.—The pain in both eyes has much abated, and the intolerance of light is not so distressing. Bowels regular.—Cont. solutio.

2d.—Says he has little or no pain in the right eye, and that the left is entirely free from it. The intolerance of light and the lachrymation have much subsided, and there is scarcely any appearance of puriform discharge.—Cont. ut antea. Low diet.

4th.—Both eyes perfectly free from pain or any uneasiness, and the intolerance of light nearly subsided.—Cont. solutio.

6th.—Intolerance of light subsided, and the lachrymation and puriform discharge nearly so.—Cont. solutio. Low diet.

9th.—Vascularity of the eyeballs considerably diminished, and the puriform discharge and lachrymation subsided; bowels regular.—Cont. solutio. Low diet.

13th.—Vascularity continues to diminish, and the acute inflammation has entirely subsided these several days past: the disease appears to be now much in the same chronic state as when he arrived from Dublin. Lids villous and vascular.—Cont. ut antea. Half diet.

18th.—The vascularity of the lids diminished, and the villosity appears gradually to subside.—Cont. solutio. Half diet.

24th.—Villosity of the lids continues to diminish, and the eyeballs are consequently less vascular.—Cont. solutio. Half diet.

December 21st.—The villosity of the lids removed; only some slight increase of vascularity remaining; cornea clear, and conjunctiva sclerotica natural. Discharged, cured.

Cases of Chronic Ophthalmia. CASE V.—William Jenkins, 47th Regiment, æt. thirty; admitted 9th June, 1822, labouring under great opacity and vascularity of the cornea of both eyes, and highly granulated lids; vision so much impaired, that he cannot walk without the assistance of a stick, or some one to guide him; complains of a dull pain in the eyes, and intolerance of light, which obliges him to wear a green shade. This complaint first attacked him on the 1st of last month, during his voyage from Bombay, by a violent pain in the eyes, which was soon followed by a profuse discharge of puriform matter. He was treated by venesection *ad deliquium*, twice repeated; blisters to the forehead, temples, and neck, and Goulard lotion. He states, that he received no benefit from the bleedings; that the pain continued unabated, until the blisters were applied about ten or twelve days after the attack. Never had sore eyes before.—Instillatur solutio argent. nitrat. gr. iv. ad aquæ ℥j. bis in die. Half diet.

12th.—The solution agrees very well with his eyes: it produces a

sensation of roughness, and a smarting pain, for about fifteen or twenty minutes after it is dropped in; which then subsides, and he feels the eyes more comfortable.—Cont. ut antea. Half diet.

20th.—Vascularity of the cornea diminished, and his vision improved. —Cont. solutio. Half diet.

July 2d.—The vascularity of the eyeballs and cornea considerably abated, and his vision so much improved, that he can now see to walk about with ease.—Cont. solutio. Half diet.

15th.—Granulations of the lids diminished, as also the vascularity and opacity of the cornea.—Cont. solutio. Half diet.

August 1st.—The granulations of the lids continue gradually to subside, as also the opacity and vascularity of the cornea.—Cont. ut antea. Half diet.

15th.—Cornea of right eye nearly transparent, and free from red vessels; that of the left still opaque, especially at the superior part.—Cont. solutio. Half diet.

25th.—The granulations continue to diminish, and become less vascular; the cornea are also improving.—Cont. solutio. Half diet.

September 5th.—The granulations are nearly removed; the right cornea is almost clear, and the left gradually becomes more so.—Cont. solutio. Half diet.

14th.—Cornea of right eye quite transparent. There is still some opacity at the superior margin of the left cornea, but it does not interfere with the axis of vision; lids nearly smooth.—Cont. solutio.

24th.—Discharged: vision perfect; both eyes natural.

Case VI.—Benjamin Callow, 81st Regiment, æt. forty-five; admitted 24th April, 1822, affected with opacity and vascularity of the cornea of both eyes, and great villosity and vascularity of the lids; the right eye considerably more diseased than the left, and he cannot see any object distinctly with it; suffers little or no pain, but has some intolerance of light, and lachrymation. These complaints are the sequelæ of an acute ophthalmia, with which he was attacked twelve months back, at Cork; which was treated by general and local blood-letting, purgatives, blisters, &c.—Instillat. solutio argent. nitrat. gr. iv. ad aquæ ℥j. bis in die. Half diet.

27th.—Vascularity of the eyelids diminished, as also the intolerance of light and lachrymation. Bowels regular.—Cont. ut antea. Half diet.

May 3d.—Intolerance of light and lachrymation nearly ceased, and the vascularity is much diminished.—Cont. solutio. Half diet.

10th.—The villosity of the lids continues to subside gradually, and the eyes to recover their natural appearance.—Cont. ut antea. Half diet.

20th.—Vascularity and opacity of both cornea diminishing, and also the villosity of the lids.—Cont. solutio. Half diet.

June 7th.—Left cornea free from vascularity, and nearly so from opacity; right improving.—Cont. solutio. Half diet.

10th.—Vascularity of right cornea nearly subsided, and the opacity also, except in one small spot, which appears to be a small cicatrix; lids nearly smooth.—Cont. solutio. Half diet.

23d.—Discharged. The lids of both eyes perfectly healthy; left eye

natural, vision perfect; right eye the same, except a small cicatrix, which is situated opposite the outer margin of the pupil, and renders vision in that direction indistinct.

Case VII.—Charles Alefounder, 3d Foot, æt. twenty-six; admitted 26th July, 1822, labouring under granular lids, with opaque and vascular cornea, attended with puriform discharge and intolerance of light: the latter symptom is very troublesome, and is the only uneasiness he experiences, as he suffers no pain. He states that this complaint commenced last December, with acute pain in both eyes; and that he has been ever since in his regimental hospital, under treatment, where he was bled, cupped, leeched, blistered, had a seton placed in his neck, and used a variety of drops and bluestone.—Instillat. solutio argent. nitrat. gr. iv. ad aquæ ℥j. bis in die, amb. oculis.

30th.—The drops have agreed very well with the eyes: they feel a little rough and painful after they have been applied, but the eyes are more comfortable afterwards. Bowels regular.—Cont. solutio. Half diet.

August 17th.—Vascularity of eyeballs and lids much abated, as well as the accompanying symptoms.—Cont. solutio. Half diet.

September 19th.—Discharged; both eyes quite well.

[To be continued.]

Art. II.—*On the Pathology and Treatment of Hydrocephalus.* By R. Venables, Esq.

Notwithstanding the numerous researches and the labours of various anatomists and physiologists, we still find the pathology of hydrocephalus involved in impenetrable obscurity. Some maintain that it is a disease of debility, and that the appropriate treatment consists in a judicious selection, and a well-regulated course, of tonics; while there are others, who as strenuously insist upon the inflammatory nature of this disease, and the necessity of active antiphlogistic measures for its relief.

Dr. Cheyne, in his first Essay on Hydrocephalus, (page 34,) observes; "To conclude, hydrocephalus appears to consist in a diseased action of a peculiar kind; but of what kind, we can as little explain as we can the nature of the scrofulous or syphilitic action. One object, therefore, here, as in these diseases, is to register and arrange every essential fact; and never to relax in our inquiry, until, by this induction, we shall arrive at a successful method of practice."

Dr. Cheyne states, 1st, that the disease often arises after a manifest disorder of the digestive organs has existed for a considerable time. 2dly. That the symptoms of the disease, when of short standing, often disappear while we are correcting the state of these organs. Hence he says, "Are we not justified by every analogy in stating, as a thing probable in the highest

degree, that hydrocephalus often arises from the brain sympathising with the disordered condition of the liver and alimentary canal."*

It is one of the misfortunes of our science, that the operations of the component parts of our structure are so involved in mystery and obscurity, that all our inferences, as well as the principles of our practice, are equally doubtful. Dr. Cheyne applies the principle of sympathy to explain an unintelligible fact. We observe that the disease of one organ frequently, during its progress, involves other parts; and, in such cases, the secondary disease is said to arise from sympathy. But what this sympathy is, or wherein it consists, none have as yet satisfactorily explained.

Dr. Cheyne asserts, 3dly, as an established fact, that, "in its first stage, hydrocephalus is evidently attended with a considerably increased arterial action."† Is it not a much more intelligible mode of explaining the pathology of hydrocephalus, when consecutive to alimentary derangement, to refer the morbid state of the brain to the generally increased momentum of the circulation, affecting more particularly the weaker structures? Is sympathy a certain relation between similar or dissimilar structures? If it be, why do we find its diseases as variable, not only in their nature, but in the parts which they affect, as it is possible to imagine.

We can readily conceive how improper diet may, by producing a vitiated chyle, so far alter the quality of the blood, as to render it unfit for the purposes of health. Thus, the excitability of various organs may be preternaturally increased, or diminished. We also know that the different parts of our system are not all equally susceptible of excitement, from the application of the same stimuli. Let us apply this reasoning to explain the pathology of hydrocephalus. A secondary effect of improper diet, is a morbid excitability of the heart: hence the momentum of the blood is preternaturally increased, and an increased afflux of blood to the different parts is a consequential effect. If the strength and vigour of these parts be such as to resist preternatural distention, or to dispose of the increased quantity of blood thus propelled to them, their healthy structure remains unimpaired. But if any, either from original conformation, or from the ravages of disease, should prove too weak for this activity of excitement, such part will suffer and manifest symptoms of disease; while the others are but little, if at all, affected.

I am well convinced that many of the diseases which are now considered sympathetic, might be thus satisfactorily, but, at all

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* *Essay I.* p. 35. † *Ibid.*

events, far more philosophically, explained.* If secondary diseases arose from sympathy, we should always find the same primary followed by the same secondary: as, for instance, hepatitis, when producing a secondary or consecutive disease, would be always followed by hydrocephalus, or pulmonary consumption, or by some one invariable and constant morbid affection. Experience, however, fully confutes this doctrine; and we find that hepatitis is followed, in some instances by hydrocephalus, in others by pulmonary irritation, or by ascites, anasarca, or cutaneous affections, according to the condition of these structures.

I have, in a work† which I have recently published, endeavoured to establish these principles; and, in illustration and further confirmation of them, I shall now submit the following case, interesting from its history, and the morbid appearances on dissection.

William Soundy, aged twelve years, a thin, emaciated boy, of a scrofulous habit. His sister died of what was supposed to be consumption.

July 16th, 1824.—I was requested to visit the above-named lad, and found him in the very last stage of emaciation; he was almost a perfect skeleton. When I saw him first, he was lying on a sofa, extremely irritable and peevish. He complained of severe pain in his head, and had complained much of this symptom for some considerable time. The eyes were clear, rather brilliant, the pupils natural in size, and perfectly sensible to light. There was a good deal of febrile heat, with a quick, frequent pulse, which, though hard, was still very small and thready. The respiration, when quiet, was nearly natural; but, upon agitation or exertion, became somewhat hurried. The bowels were sometimes relaxed, but, generally speaking, they were costive. The stools were occasionally approaching to a dark colour; they commonly consisted of a frothy mucus, mixed with a gelatinous slime. The urine was small in quantity, and high coloured; sometimes depositing a pink-coloured sediment. The skin harsh and dry; seldom any degree of moisture upon it. The tongue naturally moist, but of a cherry-red colour, with here and there a flake of a kind of sodden whitish appearance.

He did not complain of cough, and, while at rest, he experienced nothing of this sort; but exertion or agitation now and then was followed by a dry, husky cough. I inquired, but could not learn, that he had ever spit any blood, or expectorated much.

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* Vide *Clinical Report on Dropsies*, by the Author

† *Ibid.*

This boy had been ill for more than twelve months, and I was informed that the medical gentleman, who had attended him in the commencement of his illness, supposed him to be in a consumption.* He was under this gentleman's care till February last, when he spontaneously ceased to visit him longer. Of the previous treatment I know nothing; but his mother told me that, from the period in which the medical attendant gave up visiting him, she herself occasionally gave him magnesia and such mild medicines.

As the alvine evacuations were somewhat discoloured, I determined to try small and unirritating doses of mercury; and, as he appeared to labour under considerable irritation of both mind and body, I thought it prudent to combine the mercurial with narcotics. The following medicine was prescribed:—℞. Pil. Hyd. ℈j. Ipecacuanha gr. xij. Ext. Hyosciami, Ext. Lactucæ utrinsque gr. x. M. fiat pil. xij. Sumat ij. bis inter hepdomad.— ℞. Pulv. Rhei ℈j. Sulph. Potassæ ʒss. M. Divid. in pulv. xij. equal. Sumat j. bis in die pauxillo sacchari.

17th and 18th.—Little or no alteration in the symptoms; but on this day (18th) he took to bed, and did not get up.—Perstat.

19th.—As before; bowels have not been opened.—Injiciatur enema commune q. p.

20th.—The enema brought away a scanty, frothy, mucous motion. The symptoms no way abated; no thirst; appetite bad; seems unwilling to make the slightest exertion.—Perstat.

21st.—Thinks himself somewhat better.—Cont. u. a.

22d.—Not quite so well; bowels costive.—Repet. enema.

23d.—Bowels were gently moved, but the evacuations were no way healthy. The pain in the head had been very severe yesterday. Delirium and muttering, and some degree of coma, has been observed.

From the scrofulous appearance of this boy, and the evident signs of it in the other branches of his family, I determined (certainly without the slightest expectation of success,) to give the periodide of mercury; a preparation which I am inclined to report favourably of, as a remedy against scrofula. As there was a manifest tendency to coma, and as he was much averse to pills and powders, I gave him the periodide in solution.—℞. Hyd. Period. gr. x. Solutionis Hydriod. Potassæ ℥ss. Aquæ distillata ℥vj. M. fiat solutio cujus sumat coch. j. med. ter quaterve in die.†

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* As I did not see the gentleman, I cannot answer for this point: however, I have since learned, from other sources, that this was his impression.

† I believe no other practitioner in England has used these preparations; nor was I aware that they had been tried by any other in Europe, till I saw it announced, in the Edinburgh Medical and Surgical Journal, that Professor Biera has been giving them in scrofulous diseases. It is satisfactory to me to find that

From this period he became completely insensible; the breathing being sometimes quite stertorous, at other times more easy and tranquil. The eyes became fixed, with a dull, filmy appearance. The pupils neither contracted nor dilated, but were wholly insensible to the stimulus of light. He died on the 26th, at four P.M.

Dissection, on the 28th.

On opening the cranium, the skullcap was found to adhere more firmly than natural to the dura mater. The vessels on the exterior surface of this membrane were highly turgid with blood, and traces of increased vascular action were discoverable on the surface. On laying open the superior longitudinal sinus, two or three flakes of coagulable lymph were found loosely floating in the cavity. On raising the dura mater, the internal surface of this membrane was adherent in several places to the pia mater, at the point where the superior parts of the cerebrum touch the triangular space formed by the falx dipping down perpendicularly between the two hemispheres, and the dura mater extending itself over the brain. These connexions, which were formed of a strong ligamentous-like substance, were

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the Professor attributes to these preparations the same chemical properties which I had discovered them to possess. The periodide of mercury, which may be obtained by decomposing a solution of corrosive muriate of mercury by one of hydriodate of potass, in the proportions of eight to ten, is a brilliant red powder, insoluble in water, but soluble in alcohol, ether, rectified spirits of turpentine, (I believe, essential oils,) and alkaline hydriodates. When prosecuting my experiments upon these substances, I discovered that, by triturating calomel and hydriodate of potass, a double decomposition takes place; and thus I have been in the habit of forming periodide of mercury by prescription.

The hydriodate of potass is an excellent test of the presence of corrosive sublimate. I shall take the liberty of subscribing from my manuscript notes, the observations which I made upon this subject:

"It occurred to me that the hydriodate of potass might be easily and readily applied to detect corrosive muriate of mercury intermixed with calomel. With this view, I obtained a specimen of calomel, and having weighed out a drachm, I put it into a Florence flask; and having poured over it half a pint of distilled water, I heated it to the boiling point. I then took it from over the lamp, and threw the whole upon the filter. To the filtered liquor I added a drop or two of diluted solution of hydriodate of potass; but no precipitation took place.

"Having dried the calomel, I weighed out a grain of corrosive muriate of mercury, and having divided it as equally as I could, I threw away one half, and mixed the remaining portion with the drachm of calomel. This mixture I put into a Florence flask, and having poured on half a pint of distilled water, I elevated the temperature, as before, to nearly the boiling point. The mixture was now poured on the filter. Upon adding a drop or two of a very weak solution of hydriodate of potass to two ounces of the filtered liquor, distinct traces of the periodide of mercury were discoverable, by the precipitation of a red powder. The necessity of a very diluted solution with such a minute quantity must be evident, when it is recollected that the periodide of mercury is soluble in an excess of the precipitating fluid.

"The hydriodates of iron and zinc, which are readily formed by decomposing the sulphates of these metals by an alkaline of hydriodate, I have found excellent tonics in scrofula."

very firm, and, on using sufficient force to break them, tore up the pia mater.

The vessels of the pia mater, both arterial and venous, were enlarged, and turgid with a dark-coloured blood. The vascular activity which had prevailed here was very evident.

The substance of the cerebrum itself was very soft and pulpy, and showed considerable vascularity through its whole substance. The fornix quite soft; and the foramen commune anticus so enlarged, as nearly to admit my thumb to pass through. The ventricles were very much enlarged, and distended with fluid. On the first opening of the dura mater, about an ounce and a half of fluid escaped; and, during the dissection, five ounces, three drachms, and nearly fifteen minims,* were collected. The plexus choroides was very vascular, and flakes of coagulable lymph adherent to it. Coagulable lymph was exuded on the base of the brain, at the junction of the optic nerves, and extending to the pons Varolii, and over the medulla oblongata. The cerebellum was very vascular, and firm in its structure. The ventricles seemed all to communicate, their cavities being morbidly enlarged.

Appearances in the Abdomen.—On opening the cavity of the abdomen, the peritoneum, omentum, and viscera, seemed healthy. The liver was natural in size and appearance. At the back part of the right hypochondrium, however, it was found adherent to the peritoneal coat of this cavity by an adventitious membrane from inflammation. The pancreas was hardened and tuberculated: in some parts the substance, when cut into, was cheesy. The spleen was natural in size and appearance; but there were extensive adhesions between it and the peritoneum lining the left hypochondre. The small intestines contained soft fæces; but in the colon there were small lumps of hardened or indurated fæces. The mucous membrane of the small intestines more vascular in appearance than natural; externally, they seemed quite healthy. The mesenteric glands were in some places hard, in others soft; and one seemed to contain a softish matter, of the consistence of very soft butter. The kidneys healthy, as also the urinary bladder.

Appearances in the Chest.—Pleura pulmonalis adhering firmly

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* It may seem as if the quantity is stated with a degree of minuteness not to be attained. In the eighth Dissection, page 156, of Dr. Cheyne's "Essay on Hydrocephalus," he observes, "Rather more fluid than natural in the ventricles; but, with respect to this point, there was some difference of opinion." There is nothing more easy than to determine, with the utmost precision and accuracy, the exact quantity. A common glass tube, blown into a bulb or hollow ball in the centre, by applying the mouth, and thus exhausting the air, will take up the last drop, which may then be measured in graduated glasses. This was the plan which I adopted in the present instance, and which I have adopted for some time.

and intimately to the pleura costalis; lungs discoloured, hard, dense, like hepatized lungs, and, for the greater part, impermeable either to air or blood,—to the latter especially. The heart small; the substance of the ventricles very pale; the right containing blood, and frothy blood in the left ventricle. Nothing remarkable with respect to the pericardium.

The spine was in no degree incurvated; nor were the joints enlarged.

There can be little doubt that death ensued from the disorganization discovered to have taken place in the brain. But an important question here presents for our consideration: Was the disease of the brain a primary, or merely a consecutive, affection? On opening the thorax, the lungs were found very much diseased, and to such a degree as would have been sufficient to account for the fatal event, had not the state of the brain been such as to render it attributable rather to the disorganized condition of this organ. Yet I am inclined to think that the hydrocephalus, and general morbid condition of the brain, was a secondary affection, consequent to the diseased state of the lungs. I presume the primary source of ill health to have arisen in the digestive organs. Obstruction of the mesenteric glands, with an irritable and inflammatory condition of the mucous membrane of the small intestines, by inducing fever and increased vascular action, caused a greater afflux of blood to the pulmonary organs, than what their delicate structure* could support. This increased afflux of blood, in time, brought on languid inflammatory action, terminating ultimately in thickening of the pulmonary tissue, and gradual hepatization of these organs. Hence the circulation through the lungs became difficult, and the return of the blood from the brain was thus impeded. The pressure arising from the obstructed blood led to absorption and softening of the brain, and the vessels being turgid, took on the inflammatory action, as evidenced by the adhesions and layers of coagulable lymph found in different parts of the brain.

The fluid, too, which was taken from the ventricles was coagulable in toto: the whole becoming perfectly solid on being heated, without leaving the least watery residue, seems to indicate the inflammatory nature of its source.

Though the signs of inflammation in the abdomen were comparatively trifling, and of little amount, yet they were fully sufficient to justify the pathological principles just now advanced: add to which, that they were evidently traces of an early inflammatory process, which had ceased for some time.

* From the scrofulous tendency, I conceive it a fair inference that the pulmonary, as well as the cerebral structure, was weaker than what is consistent with health.

As far as I could learn, the complaint began in the bowels. At first there was little or no pain in the head, and the medical attendant looked upon the disease as pulmonary consumption:* therefore, we must take it for granted, that there could have been no symptoms whatever indicative of disease in the brain.

From the duration of the illness, (upwards of twelve months,) we may fairly assume that the brain was not originally the seat of disease; as, had it been a case of primary hydrocephalus, the symptoms would have been not only less equivocal, but no doubt infinitely more violent. Even when it came under my care, there was no vomiting, no nausea, nor any affection of the eye, which could have led to the presumption of water in the head; and yet, on dissection, nearly half a pint of fluid was found in the ventricles. Nor could it have been a sudden effusion of fluid;† because the soft and pulpy state of the brain, and the preternaturally enlarged state of the ventricles, fully showed that the accumulation of fluid was a slow and gradual process. The inflammatory adhesions, too, were evidently of some standing, and by no means of recent occurrence. The venous plethora, the arterial turgescence, and increased vascularity, are all objects of serious reflection for the pathologist. Upon the whole, I cannot but think that the disorder commenced in the alimentary organs; then the lungs became involved; and, when they became impermeable, so as that the blood could not circulate freely, turgescence of the vessels of the brain succeeded, inducing an accumulation of fluid, which at last proved fatal. The dark appearance of the vascular tissue of the brain, still further favours the foregoing view of the pathology of this case.

The influence which a morbid state of the digestive organs may exert in exciting hydrocephalus, is by no means a new idea. Drs. Cheyne and Yeats have shewn a great deal of zeal in this inquiry, and their labours have not been in vain. Dr. Cook, in the first volume of his "Treatise on Nervous Diseases," page 384, observing on the opinion of Dr. Yeats, that hepatic torpor is frequently a source of hydrocephalus, says, in a note, "It may be doubted, however, whether the affection of the brain be the consequence or the cause of the derangement of the functions of the stomach, liver, and intestines."

Be this as it may, they should never be neglected, because their re-action on the system in general, and on the weaker organ in particular, should be counteracted. In the present

* I do not know the symptoms upon which such a diagnosis was formed. I was given to understand, that there was neither cough, nor expectoration, nor any hæmoptoë.

† It will be recollected that, on the 23d, the patient was comatose. Previously, he merely complained of severe pain in the head.

case, disease of the alimentary canal seems to have induced hepatization of the lungs; and this latter to have led to the effusion of water into the brain, and considerable disorganization of this organ. Thus, we discover a primary, and perhaps trifling, indisposition of one part ultimately exerting a fatal, though gradual, influence, through a succession of intervening diseases.*

Another subject for consideration, and of no small importance, is whether a more active treatment than what appears to have been adopted might have proved more successful. I am strongly inclined to support this opinion.† There was, no doubt, a great tendency to inflammatory action, and, had measures calculated to reduce the phlogistic diathesis been instituted, and vigorously prosecuted, I must confess that I should anticipate a very different result. The means of counteracting the inflammatory tendency, are too well understood to require any comment in this place. However, there is one means for the attainment of this object, which seems to be much neglected by practitioners,—namely, *regimen;* under which term I comprehend clothing, diet, air, and exercise.

In such a case as the above, perhaps active depletion, frequently repeated, was not exactly indicated. A permanent drain, by a seton or issue, I should conceive better suited to the circumstances of the patient, and more adapted to control that languid inflammatory action, to which the system and the different organs seemed disposed. The inflammatory tendencies were not of that active description which require large and repeated venesection. The habit was to be broken rather by gradual, but permanent, operations. Regimen, in the comprehensive acceptation of the term, and issues, present the most favourable prospect in similar cases. I know a lady, who at an early period of life was attacked with severe hemoptysis, of a very serious nature, and considerable apprehensions were entertained for her safety. An issue was inserted in the arm, which checked the hemoptoe; and, about two years ago, I saw her in perfect health.‡ There was a scrofulous tendency in the

* The great advantage of a general examination of the body, must be very apparent from the above statement. The head was the part which I suspected to be diseased, and the brain was that first examined. The brain was found sufficiently diseased to account for the fatal event. By many, perhaps, the morbid inquiry would have been here terminated. But it must be evident, whether the views which I have advanced be admitted or not, that the examination of the brain alone would have given but a very limited and indistinct view of the nature and extent of the morbid changes in the different structures; and, consequently, the pathology of the case would have been but very imperfectly understood. I would, in all cases of post-mortem inquiry, examine all the vital organs, and the viscera of the abdomen.

† I could not learn that any active antiphlogistic measures had been adopted.

‡ I cannot say whether the issue still continues open.

family, and great fears were entertained lest the disease should terminate in phthisis pulmonalis.

Of course, the due regulation of the bowels, and attention to the digestion, would be objects of the utmost moment in the treatment of such cases. Whenever, from a scrofulous taint, the brain, the lungs, or any other part, is debilitated in its structure, the excitement and vascular activity arising from obstructed bowels or morbid digestion, will certainly induce diseased action in these parts, unless the morbid condition of the alimentary canal be removed, and the deranged state of the digestion be corrected.

Such are the reflections which, from a most careful and attentive review of the history and pathology of this case, have occurred to me. The facts I have candidly stated,* and faithfully recorded: the reader will determine for himself, whether the inferences be legitimately deducible.

Henley-upon-Thames; July 31, 1824.

ART. III.—*Illustrations of the Efficacy of Compression and Percussion in the Cure of Rheumatism and Sprains, Scrofulous Affections of the Joints and Spine, chronic Pains arising from a Scrofulous Taint in the Constitution, Lameness, and Loss of Power in the Hands from Gout, Paralytic Debility of the Extremities, General Derangement of the Nervous System; and in promoting Digestion, with all the Secretions and Excretions.* By WILLIAM BALFOUR, M.D. of the University of Edinburgh.

[Continued from page 115.]

CASE XXXI.—Mrs. D., aged twenty-seven, became my patient on the 30th April, 1822. She was affected with pain in the shoulders and muscles of the neck; along the whole course of the spine, from the occiput to the coccyx inclusive; over all the ribs, particularly at their anterior or cartilaginous ends; in the point of the breast-bone; in the muscles of the loins; along the tops of both haunch-bones; in the hips, in the hip-joints; in the thighs, in the legs. It is almost needless to say that these symptoms were accompanied with the greatest degree of debility. The patient was just capable of locomotion, and that was all. With the aid of a stick grasped firmly in both hands, she could rise from her seat, by an exertion of five minutes' continuance, and then transport herself, leaning on the stick in both hands, to a little distance, by shoving her feet alternately, one inch at a time, along an uncarpetted floor. She could not raise her feet, in any degree, from the floor. She was lifted into and out of bed, like a child. Her knees and feet were permanently fixed, at about two inches distance from each other; she could neither separate them further, nor make them approximate nearer, on

* I was assisted in this dissection by Mr. Moran, (surgeon and assistant to Mr. Brooks, of this town,) Mr. Brooks, jun. and Mr. Young.

account of pain in the hip-joints. She informed me, she was sure the opposite sides of the pelvis had approximated considerably since her last child. She had been in this state for three years and a half, without experiencing any other change than increase of debility and pain. All the remedies, external and internal, which had been prescribed, had no beneficial effect, either in removing or in arresting her complaints.

Before I discovered the efficacy of compression and percussion in rheumatism, and complaints allied to it, I would have considered this case hopeless; and would have got off, like those who preceded me, by prescribing exercise in the open air and sea-bathing. The former, however, the patient could not take; and her condition in life precluded her from availing herself of the latter: she must, therefore, have been for ever lost to her family. Even with all my experience of the efficacy of the new practice, my hopes of effecting a cure were any thing but sanguine. Indeed, had I been required to give a decided opinion, it would have been that her extreme debility, the nature and inveteracy of her complaints, combined with the multiplicity of the parts affected, forbad the hope of her condition ever being much ameliorated. But my opinion was never asked. The reports which had reached the patient of the success of my practice in similar cases, had inspired her with perfect confidence that she also would be benefited by it: she, therefore, resigned herself to my care, without ever entertaining a doubt of a favourable issue.

If the reader can imagine a person so generally affected with disease, and so debilitated, that the slightest touch on any part of the trunk of the body would not only occasion pain, but cause a vibration of the whole nervous system, then he will have some faint idea of the condition of this patient. It may well be supposed, therefore, that I commenced my operations with the utmost gentleness and caution: not that this heroic woman objected to any degree of pain which it might be necessary for her to suffer, but a rude and forcible mode of proceeding would not have accelerated the cure. It is by tact and skill that such cases are successfully managed; and this tact and skill are to be acquired, as every other medical qualification is acquired—from practice.

The affections of the external and soft parts quickly yielded to compression and percussion; not so the cartilaginous and deep-seated. When percussion was applied to the sacrum, however slightly, intolerable pain was produced in all the connexions of the os innominata, and darting through the centre of the pelvis, issued, as it were, from between the crura of the pubis. When the pubis was firmly supported, however, these effects were not produced: on the contrary, percussion could be applied to any part of the pelvis, with the greatest good

effect. This course was, therefore, followed. Slight percussion on the inferior lumbar vertebræ caused a nervous vibration to the very toes, which was rather pleasurable than otherwise. But the most formidable difficulties I had to surmount in this case were defined, painful spots all round the brim of the acetabulum, which obstructed the motion of the hip-joints. These points it was necessary for me to reach with my fingers, for the purpose of compressing them, before passive motion of the joints could be attempted. This it was no easy matter to accomplish. I succeeded, however, not only in reaching all the affected points, but also in removing the pain in a few days, with one exception only. This point, which for ten days set all my efforts at defiance, was situated on the front and very flexure of the joint, exterior to the course of the femoral artery. It was extremely minute, and I often reached it, but never in such a way as to remove the pain. Conceiving, therefore, that this was owing to some inequalities, which required a greater degree of compression than I had yet employed, I one day, after putting the thigh in a proper position, pushed the point of my fore-finger as deep into the flexure of the joint, at the pained part, as I could; when, depressing the palm of my hand and raising the point of my finger, which I still kept closely applied to the part, I struck the point I was in search of fairly in front. The patient immediately called out, "You have it now; give it no quarter." The pain was removed in less than half a minute, and never returned. The motion of the hip-joints was now perfectly free, and remained so. Pain was also removed from every point of which she complained; so that, at the end of three weeks from the time I was called in, a complete cure was effected. The patient, however, as may well be supposed, had still to contend with a considerable degree of debility; which time, air, and exercise alone could effectually remedy: but of these she could now avail herself, as her strength had been so far restored by the operations, that she was able to go to the country; and I have not heard of her since.

In the course of my attendance on this patient, she observed one day, that "surely the operation of compression and percussion must have a beneficial influence on the general health, as I find my appetite greatly improved since their commencement: nay, I am compelled to eat immediately after every operation, before I have time to put my dress in order." This observation was spontaneous, and quite accords with that of many others of my patients.*

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* The great length of this paper, and the press of other matter, have obliged us to omit some parts of it; among others, Cases 32 and 33: the former an instance of severe rheumatism, and the latter of a tumor on the sole of the foot, cured by the remedy so strongly recommended by the author.—EDITORS.

Case XXXIV.—A lady, aged sixty, consulted me in April, 1822, for a complaint that excites but little sympathy, and is often made a subject of merriment, but which is nevertheless sufficiently distressing to those who are afflicted with it. She was of a delicate constitution, and had for many years been subject to paroxysms of low spirits, uneasy feelings, and nervous irritation. Unable to take exercise in the open air, she was often so oppressed in her spirits and feelings, that she could neither lie, sit, stand, speak, or listen to others. On such occasions, existence itself was rather a burden than a pleasure.

It was from having heard, from some of her lady acquaintances, of the beneficial effects of my operations on their health and spirits, that this patient applied to me; and, happily, I was not long of convincing her that their reports had not been without foundation. As she had no local pain, I satisfied myself with applying percussion to the spine, shoulders, and superior extremities. This I did gently at first, but gradually increased the force, as far as was agreeable to the patient's feelings. The effects were an improvement of feeling and a buoyancy of spirits, far exceeding her expectations. I explained to her the principles of my practice, which she readily comprehended, and considered the information as a most important acquisition. She had the operation performed by her servant afterwards, as occasion required; by which means, she said, she could command exercise, almost equal to equestrian. The fact is, if equestrian exercise possesses the advantage that the patient enjoys the open air in addition to the simultaneous concussion of the whole body, percussion has this superiority to both gestation and walking, that it may be applied at any time; that it is applicable to the most delicate, without occasioning fatigue; that it may be applied with precisely the requisite degree of force; and so as to produce local or general effects, as the case requires.

I saw this lady some months afterwards, when she informed me she found her health and strength greatly improved by percussion, which had enabled her to take much more exercise in the open air, and that she was now a stranger to those paroxysms of low spirits, uneasy feelings, and nervous irritation, for which she had originally consulted me: at any rate, that she was able to repel their approach at any time, and in half a minute. I met her yesterday, (21st June,) returning from an excursion into the country, walking at the rate of four miles an hour.

Case XXXV.—Mr. D., aged thirty, of a very fair complexion, with large upper lip, and other signs of a scrofulous diathesis, became my patient in April, 1822. He complained of pain and stiffness of the joint of the lower jaw-bone, which prevented him from opening his mouth sufficiently to receive and chew his food; of pain and stiffness of

his neck, which rendered his head immovable in any direction; of pain and rigidity of the shoulders; of pain along the whole course of the spine, which was considerably bent forward, and gave the patient a stooping gait; of pain in the point of the breast-bone, and cartilages of all the false ribs; in the loins; all along the tops of both haunch-bones; in the hips, where the muscles were knotted in a surprising degree; in the tendons of both heels, particularly at their insertion. These complaints were of nine years' standing, and had reduced the patient to a great degree of debility. When I was called, he took three-quarters of an hour to walk half a mile, and that with the greatest constraint and pain.

If it is an established doctrine in pathology, that parts which, in a sound state, are possessed of little sensibility, become sensible when affected with disease, in an inverse ratio; then, simply to say that this patient was pained in such and such places, is to convey but a very faint idea of the actual facts of the case. Many are pained in the same regions, but not in the same structures, and therefore do not suffer the twentieth part of the pain which he endured. His complaints were not confined to the muscles or soft parts, though these were very considerably affected: they were deep-seated in the immediate coverings of the bones and cartilages, if not in the very substance of the cartilages themselves. These circumstances, equally distressing to the patient and formidable to the practitioner, rendered a cure infinitely more difficult than if the soft parts had been exclusively affected.

I applied compression above and below the zygomatic arch, as directly on the maxillary hinge as possible, with good effect;* and then percussion to the chin, while the patient kept the strong muscles which elevate the lower jaw in as relaxed a state as possible. By these means, I succeeded in enabling the patient to open his mouth to a very considerable extent, at every operation, and ultimately to open and shut it without foreign aid.

In order to give motion to the head, I insinuated my fingers among the muscles of the neck as deeply as possible, that I might compress the cartilages and their coverings which belong

* "A short time after I had been in attendance, a singular circumstance occurred, which afforded me an opportunity of demonstrating, to a gentleman of eminence in the profession, the efficacy of the mode of treatment I had adopted in regard to his lordship.

"A small, but extremely painful, tumor suddenly appeared on the ramus of the lower jaw, right side, immediately under the zygomatic arch. It impeded greatly the motion of the jaw, but disappeared almost entirely upon the application of simple pressure. It recurred, however, for three or four days successively; and, on one occasion, shut almost entirely the patient's mouth. The gentleman alluded to was present that day when I called, and I requested him to stop till I should remove the tumor, and enable his lordship to open his mouth; both which I expected to accomplish in the course of three minutes. The event justified my expectations, in half the time specified."—See my *Treatise on Rheumatism*, Case 50, page 217; 1819.

to the vertebræ, where chiefly the mischief lay. This it was no easy matter to accomplish, considering the acute sensibility of the parts affected; but *omnia vincit labor.* These efforts I alternated with passive motion of the head, which was effected by making the patient shut his mouth, and then applying percussion, first under the chin, and then contrariwise. This produced motion of the head, backwards and forwards. I gave lateral motion, by fixing the neck with one hand, grasping the crown of the head in my other, and giving it (the head) a slight jerk, first to one side, and then to the other. Rotatory motion was effected, by taking the chin in one hand, (the patient keeping his mouth closely shut,) and the upper and back part of the head in the other, and then giving it (the head) a slight rotatory jerk, which was equivalent to both compression and percussion on the very points obstructing motion.

For a considerable time, little or no impression seemed to be made on the disease, the nature of the parts concerned (spinal marrow) precluding the idea of force. Skill, tact, and perseverance alone, were here available; and a most important matter it is, that any thing is of avail in such a case. In little more than four months, pain was removed from the neck, motion given to the jaw, and to the head in every direction.

The other parts could be treated with more freedom, and, though obstinate, also gave way within the time specified. The knots in the glutei muscles were extremely tender, but disappeared under compression, as completely and permanently as if they had never existed. In fine, by the end of summer, the patient could walk like any other person, and was able to keep on his feet for many hours together; a consummation which a great physician, now no more, predicted, long before, would never take place.

Case XXXVI.—Mr. A., aged thirty-six, a jockey, consulted me, in April 1822, for lameness in both feet; but, whether occasioned by gout or rheumatism, I leave the reader to form his own opinion. In other respects, the man was in perfect health, full of flesh and blood, and lived rather freely. Both feet were much swollen, from the ankle-bones to the points of the toes inclusive, and in some parts red and shining. There was great pain at the base of the inner ankle-bones, in the ankle-joints, among the tarsal bones, and in the soles of the feet, along the course of the tendons of the toes. In walking, which he did with great difficulty and pain, the patient had no spring or motion in the feet themselves, but lifted and put them down perpendicularly, as if they had been mere stumps. He scarcely ever attempted to walk, indeed; as, when he went abroad, it was always on horseback. The disease had existed a great length of time, had become gradually worse, and, when I was called, completely prevented rest in the night-time.

It is with rheumatism as with other diseases: some cases

appear trifling at first, but prove obstinate ultimately; while others are formidable at first view, but yield sooner and more easily than could have been justly expected. Of the latter, the present case is an instance. Notwithstanding the parts affected were so acutely pained, that, in the application of compression, and also in giving passive motion to the ankle-joints and metatarsal bones, the utmost caution was requisite; yet this man was only sixteen days under my care, during which he had no more than eight operations, when he found himself independent. Had my opinion been asked at first, I would have said that months would elapse before a cure could be effected. The first symptom of amendment that occurred was perfect rest in the night-time; whereas, he had not, for a great length of time, known what a sound sleep meant. In percussion, gently applied, the patient delighted: it created a sensation rather pleasurable than otherwise, and principally contributed to effect motion of the bones on each other. Without it, no cure of this case could have been effected; because all the usual remedies had had a fair trial, in vain, long before I was consulted.

Case XXXVII.—A gentleman, aged forty, became my patient in May, 1822. He complained of vertigo; muscæ volitantes; frequent sickness, with disposition to vomit; loss of appetite; obstinate costiveness; frequent pain in the bowels, especially in the night-time, "as if torn by vultures; pervigilium; rheumatism in his loins, thighs, legs, and soles of his feet. The whole nervous system was so debilitated and unhinged, that he could not stand. All his friends thought him dying; and so persuaded was he of this himself, that he had settled his affairs. He had been ill for years, but how long I cannot tell. There was no secret made, however, of his complaints having been induced by free living alone.

Four or five practitioners, of the first eminence, had attended this patient, together or successively; but all had drawn off, without having been able to render any material assistance. It must not be supposed, however, that I intend the slightest reflection on these eminent individuals. I only mean to show that compression and percussion are available in many cases and circumstances, in which medicine has little or no power. I put it to the common sense of mankind, which of the modes of cure is preferable,—that which was prosecuted for years, before the patient's strength was greatly reduced, without any beneficial result; or that which in a few weeks restored him to health and strength, after having been brought to the brink of the grave? I put it to the common sense of mankind, if the discovery of so efficient a remedy as compression and percussion proved in this instance, is not of the highest practical importance?

When I commenced my treatment of this case, I found it necessary to proceed with as much caution as if an infant had been

under my hands. This was owing to the extreme sensibility of the nervous system, which was so susceptible, that a very slight degree of percussion on the spine caused a vibration through the whole frame. At first, this operation occasionally produced a slight and momentary degree of sickness; and the patient soon after vomited a mouthful of an offensively sour, greenish substance, and immediately felt greatly relieved. As the nervous system acquired tone, however, these effects disappeared, and, instead of sickness being produced, the stomach was invigorated, and the appetite improved. Not that the sickness and vomiting, which occasionally took place when the operations were first employed, were to be regarded as hurtful; on the contrary, they were the most salutary: they were the effects of a gentle stimulus communicated to the stomach, by which it was enabled to throw off offensive matter.

I found my patient had been in the habit of swallowing great quantities of aloetic pills, without reflecting that, where the ingesta are small, the egesta cannot be copious. I had no difficulty, however, in convincing him of the impropriety of such a proceeding; and that the racking pains in his bowels were partly attributable to the drying and heating medicine, which he took in such enormous doses, and so frequently. Accordingly, the pills were instantly given up; and aleberry, for supper, was resorted to with good effect. Gentle compression and percussion were also applied to the abdomen, as well as to the spine, every day, with deliberation and perseverance.

The rheumatic affection of the loins and inferior extremities was very severe, and, consequently, required the most delicate management. At first, compression, not greater than sufficient to break an egg-shell, could scarcely be borne; and a very slight degree of percussion affected the whole frame precisely like a shock of electricity. I was no way intimidated, however, by these circumstances; because I believed, and assured my patient, that every operation would diminish the extreme sensibility of the parts, and of the system at large. I was not mistaken. For a while, indeed, little or no impression seemed to be made on the complaint; but, at the end of about three weeks, general amendment was evident. The vertigo and muscæ volitantes now recurred less frequently, and were experienced more slightly; the stomach and bowels had considerably recovered their tone and functions;* the limbs their strength; sleep had returned; and the whole nervous system was invigorated. Compression and percussion, the only remedies employed from beginning to end in this case, could now be applied with

* In my preliminary observations, reference was made, by mistake, to Case 40, instead of this, as an instance of "intestinal excretion being greatly promoted by percussion to the abdomen."

considerable freedom; not only without inconvenience to the patient, but with immediate and insensible improvement of feeling. On these data, I considered a cure as now certain, and that perseverance alone was wanting to complete it. Soon after this, the patient was able to rise from a chair, to stand, and sit down, without aid. Then he came to walk through his room; then to walk down and up stairs, without help; then to walk in front of the house; then to go to the country in his carriage, and take a walk on a country road; and, at the end of seven weeks from the time I was called, I left him free from complaint, and walking over all the town.

Summary.—Case of a gentleman, for years afflicted with a nervous affection of the head; indigestion, sickness, and vomiting; pains in the bowels, as if torn by vultures; costiveness; rheumatism, from the loins to the soles of the feet inclusive; he could neither walk, nor stand, nor rise to his feet, the whole nervous system being in a state of great debility and derangement. Cured, so as to be able to walk all over the town, in seven weeks.

[To be continued.]

ART. IV.—*Cases of Small-Pox after Vaccination; with Remarks.* By JAMES HARDY, Esq. Member of the Royal College of Surgeons, London; and Member of the Sheffield Medical and Surgical Society.

THE occurrence of small-pox after vaccination is a subject which, from its importance, has attracted the attention, not only of the medical profession, but of the world in general; and, although the subject has been treated in a very copious and scientific manner, it is far from being exhausted.

There exists in the public mind a very great difference of opinion respecting the propriety or efficacy of vaccination: indeed, the opinions of members of the medical profession are far from being unanimous on the subject; and, whilst that is the case, there is little prospect of the public mind becoming so. Under these circumstances, I think it the duty of every one to communicate such facts as may have fallen under his observation, which may have a tendency to elucidate the subject.

Having lately had the fortune to meet with several cases of this disease, it has induced me to choose this as the subject of my paper. Indiscriminate or extravagant praise, although it may temporarily succeed in establishing a remedy, will, unless it be founded in truth, be sure to be detected in the end, and injure the cause it was intended to uphold. Although, perhaps, a great majority of the profession (and amongst which I must be allowed to rank myself,) advocates the cause of vaccination,

yet I do not conceive the subject established on such an immutable basis as to preclude any change of opinion. It is justly remarked by Dr. Gregory, in a valuable paper which appears in the last volume of the Medico-Chirurgical Transactions, that these unpleasant occurrences are on the increase, and no certainty exists that they have yet reached their maximum. I have for a long time wished to satisfy myself, whether vaccination is capable of affording different degrees of protection in the same subject. Dr. Gregory, if I understand him correctly, unhesitatingly decided in the affirmative. Undoubtedly, we witness occasionally after vaccination every degree which small-pox is capable of exhibiting; yet how are we to decide whether this be owing to the degrees of protection afforded, or to peculiarity of constitution in the patient? Vaccination may have gone through its course in perfection in both cases, not only in appearance, but in reality; it may have produced the greatest effect which it is capable of producing, and yet, in some constitutions, not be a preventive of small-pox.

Most writers, who have treated the subject, lay great stress upon the appearance of the cicatrix: as far as my experience enables me to judge, much reliance is not to be placed upon this circumstance. I have witnessed the disease in nearly every degree, under almost every appearance of the cicatrix, and I am inclined to think that, in general, when vaccination produces a pustule containing virus capable of reproducing the same disease, it has effected all which it is capable of effecting.

Case I. March 3, 1824.—B. M. aged thirteen years. She has been vaccinated; the cicatrix was distinct, about middle size, and slightly cellular. She had very high fever, with delirium; the eruption soon became vesicular, and became pustular about the seventh or eighth day of the disease: it was very numerous on the arms, but moderate on the face and body. On the ninth day, they began to decline very rapidly, and the fever had quite subsided. On the sixth, seventh, and eighth days, there was considerable swelling. On the thirteenth day, I found her playing in the street. The pocks had almost all disappeared, and there was no secondary fever.

Case II. March 7, 1824.—M. aged one year, was vaccinated at the Infirmary, Sheffield, about four months ago: the pustules (two) were very much inflamed, and sore for a long time; in fact, they are only just got well: they suppurated several times; they are now of a moderate, not large size,—not cellular. The disease was very mild in this case; the eruption was small, and not numerous, except about the knees and one or two other places: they all died away about the third or fourth day. It was attended by very little fever.

Case III. March 14, 1824.—G., about three years of age, was vaccinated at the Infirmary about a year ago: the cicatrix is of the common size, rather faint; and his parents state that he had a very fine pock, which went through the regular course: He is now under the

influence of small-pox (the ninth day): the pustules are very numerous, though generally distinct, and they do not appear to be at all modified. The fever is, perhaps, rather less than might be expected.

April 2.—The pox continued quite as long as in the natural disease.

Case IV. March 13, 1824.—M., fifteen years of age, sister to the subject of Case II., has been vaccinated: cicatrix middle size, faint.

21st.—She has had the disease very slightly: the pustules exceedingly small, not numerous, and disappeared in four or five days. The general indisposition was but slight.

Case V. March 20, 1824.—B., nine years of age, sister to the subject of Case I.: cicatrix similar to Case IV.; considerable fever; the pustules very few and small.

26th.—She was well in a few days.

Case VI. April 2, 1824.—D. H., betwixt two and three years of age, has been vaccinated, and there are two distinct moderate-sized cicatrices. An eruption of small-pox came out on the 27th, 28th, and 29th of March, numerous, but distinct: they are rather smaller than in the natural disease, but appear to be running through the regular stages. The fever was very high, and the patient died on the 10th of April.

There have been many cases of small-pox in unprotected children, in the immediate neighbourhood of this case and of case 3d; and yet it is a singular fact, that these two cases were more severe than any of the others; a circumstance which, it is natural to suppose, would have a tendency to prejudice the minds of those acquainted with it against vaccination.

Case VII. April, 1824.—L. W., nine years of age, was vaccinated at the Infirmary, when an infant: there were two distinct cicatrices on the arm. The eruption was moderate, and began to decline in about eight days.—A sister of the above, three years old, and who was unprotected, received the small-pox infection from her brother, and had the disease rather mildly.

Case VIII. May, 1824.—L. I., a brother to the subject of Case VII., was vaccinated by a woman in the neighbourhood: has a distinct and cellular cicatrix. He had considerable fever, and a slight eruption, for a day or two.

Case IX. March 17, 1824.—Mrs. F., twenty-six years of age, had the small-pox naturally when a child, and some of the cicatrices are very distinct. Fever commenced on the 14th, is very violent, and she has had a convulsive fit to-day, and is sometimes delirious. An eruption, similar to small-pox, is making its appearance.

19th.—The eruption has made the usual progress, is not very numerous, and the fever is considerably abated. The skin surrounding the pocks is, perhaps, more inflamed than usual.

25th.—The disease appears to be scarcely, if at all, modified.

Case X. May 17, 1824.—Samuel F., three years old, son to Mrs. F., was vaccinated at the Infirmary this day week; has had a fit to-day, with symptoms similar to his mother's, with an eruption. The vaccine vesicles are small, and appear to be not at maturity.

19th.—He is better: the eruption is more numerous than that of his mother.

25th.—There appears to be no difference between this disease and natural small-pox.

Case XI. May 17, 1824.—F., another child of Mrs. F., four months old, was vaccinated at the Infirmary this day week: has slight fever, and a trifling eruption. The vaccine vesicles are arrested in their progress; they appear as they usually do on the fourth or fifth day.

25th.—The eruption never came to maturity, but remained small and shrivelled, with an increase of fever. The child died this morning.

Case XII. May 26, 1824.—L. E., seven years of age, sister to the subject of Case VII. &c. She was vaccinated at the Infirmary when one year old: there is a fair and distinct cicatrix on the arm. She is now very full of small-pox: they came out on the 19th, and appear to be unmodified; they are of the distinct kind, but very numerous.

Case XIII. June 5, 1824.—S., aged three years, has been vaccinated at the Infirmary; has a brother and a neighbour labouring under small-pox. An eruption came out this morning.

12th.—Disappeared in a few days.

I saw another case at the same time, closely resembling the above; and another since.

Dr. Gregory says, that "small-pox after vaccination unquestionably prevails in particular families, showing that in them there exists some peculiar susceptibility of the variolous poison. Various instances of the kind have fallen under my own immediate observation."

It will be perceived, from the cases which I have related, that the same circumstances occurred to me; but, in my opinion, the circumstance of exposure is a more probable explanation of the fact than the one given by Dr. Gregory; particularly as the cases given by him in illustration, as well as those related by me, occurred nearly at the same time, and in subjects of very different ages.

Sheffield; June 16th, 1824.

Art. V.—*Case of Spontaneous Evolution of the Fœtus.* By Robert Brown, Esq. Preston; Fellow of the Royal College of Surgeons, &c. London.

Mrs. Thomas T., ætatis twenty-six, of a constitution moderately strong, the mother of three children, between seven and eight months advanced in pregnancy; on Saturday evening, June 26th, was severely shaken whilst returning in a coach from a visit at a distance, and also very much distressed in her mind from some domestic cause. On the following day, she experienced trifling pains in the belly and loins, which continued progressively to increase. I was called to her at half-past six

o'clock this morning (June 28, 1824). The pains were strong and urgent. I directed the patient immediately to lie down in the usual position on the bed. On examination per vaginam, I found the membranes very full and tense, and acting strongly against the os externum. During the second pain, I accidentally and unintentionally ruptured them; when a copious discharge of liquor amnii took place. The pains from this time became very trifling and long distant; and the discharge became hemorrhagic, and continued to be poured off in large quantity, both during and in the absence of pain, for about an hour and a half. On extending my search for the cause of the sanguineous evacuation, I found the placenta (as I previously conjectured) separated from its original place of attachment, occupying one edge of the sacral portion of the os uteri, at the superior aperture of the pelvis; and which I could only ascertain and arrive at by first breaking through the large clots of coagulated blood, which filled up the hollow of the sacrum, &c.

After many fruitless attempts to discover the presenting part of the child, I at length felt the right hand of the fœtus in the middle of the right ileo-pectineal margin. The os uteri was only so much dilated as to admit my hand to the knuckle, upon which it acted most painfully; the patient complaining sometimes of great pain in the loins, but of still greater in the abdomen. In the interval of the pains, I endeavoured to pass my hand, so as to bring down one or both feet of the fœtus; but, after giving the patient about three ordinary-sized tea-spoonfuls of tinct. opii, at twice, and four hours' deliberate and persevering attempt, I could never reach further than the ileum of the child, such was the spasmodic action which the uterus manifested. At times, however, during my endeavours to turn the child, a surprising degree of dilatation took place at the cervix and lower part of the uterus, whilst the upper firmly encircled the body of the fœtus, rendering all attempts to reach the feet, for some time at least, both futile and dangerous.

Having employed all the tinct. opii which I brought with me, and fearing to do mischief by continuing the attempt to deliver my patient under the existing circumstances, I set off home for more; but, on the way, called upon my friend, Dr. Moore, to borrow some, and invited him to accompany me. As we passed out at his door, a messenger came running to send me back. When I arrived, an attendant was officiating. The breech and half of the body of a dead female child were protruding at the os externum; and a pain soon following, the whole was expelled, preceded (as we were informed) by a large mass of coagulated blood. Immediately on separating the child, the placenta was found low down in the vagina, and was speedily, and with the greatest ease, removed.

Evolution of the fœtus was in this case a most fortunate, but a very unexpected and agreeable, issue: the extremely violent and long-continued spasmodic action of the uterus rendered the effort to turn both unavailing and perilous.

On withdrawing my hand from the uterine cavity, the patient appeared disposed to sleep, arising, probably, from the quantity of laudanum given; which also was, no doubt, favourable to the change which so soon followed, as she only suffered from three or four pains from its taking place to the expulsion of the child. The child was of the size usual at this period of utero-gestation, and was alive when I made the attempt to turn. The hand and arm that presented were greatly discoloured, from the unavoidable pressure made upon the upper part of the arm against the brim of the pelvis, in the attempt at the operation of turning.

The recovery of the patient has been uninterruptedly good.

The following observations on spontaneous evolution of the fœtus, are taken from the last edition of a very valuable and highly useful practical work, the "Synopsis of the various Kinds of difficult Parturition," the production of a zealous and experienced practitioner, Dr. Merriman: they coincide so exactly with the remarks which I had intended to have made on this occasion, that I have preferred quoting them; being, in my opinion, exceedingly applicable, and more likely to be considered orthodox, than any thing which I could have furnished.

"The occurrence of the spontaneous evolution has, however, been comparatively so rare, that no man would be justifiable in simply relying upon it. The knowledge that it has sometimes happened, may, indeed, under some circumstances of extreme resistance to the passage of the hand into the uterus, reconcile us to the delay which I have recommended; but we should never allow it to operate upon our minds, so as to induce us to neglect the proper means and proper time of turning, when we have it in our power. It is the duty of the accoucheur, on all occasions, to give to nature every possible opportunity of exerting herself for the relief of the patient; but it is equally his duty, when nature becomes embarrassed and oppressed, to interpose the timely assistance of art, lest nature, being compelled to relinquish the task, the patient shall fall a sacrifice to the delay."

Preston, Lancashire; August, 1824.

ART. VI.—*Case of Puerperal Fever.* By H. SANDERS, Surgeon, &c.

MRS. S., ætatis forty, married, was delivered of her first child, still-born, about three years, after a safe but lingering labour. During her present pregnancy, and particularly during the last three weeks, she has complained of very severe lancinating pains in the left hypochondrium; but, from a persuasion that they were connected with, and depended on, her pregnancy, medical advice was not sought.

Labour having commenced about twelve o'clock on the Sunday evening, I was sent for. On examination, I found the os uteri little better than half dilated; the membranes had ruptured, and the liquor amnii was drippling away,—indeed, had mostly escaped. The pains very frequent and severe. The funis, which was of considerable size and length, was hanging between three and four inches without the os externum, and the pulsation distinct.

The right hand was introduced into the uterus without much difficulty, and the right foot brought down into the vagina, where it was fixed by a fillet. The pains became gradually less strong, and in about an hour almost suspended, the patient having an unconquerable inclination to doze. Several injudicious attempts were made to rouse my patient, and recall the uterine efforts, by drawing the foot occasionally down by the fillet. Not finding such moderate efforts as I conceived admissible of any avail, I for the present abandoned further extractive efforts. From this time (about four in the morning) until about eleven, my patient slept: her pulse was good, and she took occasional nourishment without inconvenience. The pains now gradually advanced; but, to my great mortification, there was not a corresponding advance in the fœtus, the foot remaining in *statu quo.* The pulsation at the funis was now considerably weakened. I then, with some considerable resistance, gradually introduced my left hand, and brought down the other foot, which I likewise secured by the fillet. Delivery was then suffered to proceed in the usual way, which took place about three o'clock in the afternoon, pulsation having completely ceased in the funis; and I think it right to observe, that the child was remarkably large.

The placenta followed in less than an hour. My patient took twenty-five drops of laudanum, and fell into a comfortable sleep, which lasted some hours.

The following day (Tuesday), had passed urine freely, and without pain; after-pains trifling; lochia natural.

Wednesday.—The abdomen has become tense and swollen. The pain previously complained of has returned, with increased violence; can only lie on the right side. Neither the pulse nor

tongue indicated the presence of active inflammation.—Salines and Dover's powder were prescribed, with a saline cathartic.

Thursday.—Pain somewhat increased on pressure, and the symptoms more inflammatory.—Blood was extracted from the arm to twenty-four ounces, and the salines and anodyne continued.

Friday.—Symptoms aggravated.—Twenty leeches were applied to the abdomen; blood abstracted from the arm to sixteen ounces; and the remedies continued.

Saturday.—Pain less; abdomen less tense, but still more so than natural; the blood highly cupped and buffy.—I bled again from the arm to twelve ounces; applied twelve leeches to the seat of pain; and continued the saline, without the Dover's powder.

Sunday.—The abdomen still very tense and painful; the tongue dry; respiration laborious. The blood equally inflammatory with that drawn on the preceding day.—I bled again from the arm to twelve ounces, *ad deliquium;* applied twelve leeches to the abdomen; and prescribed effervescing salines.

Monday.—Pulse 130, small, hard, and tremulous; pain increased; milk in the breasts totally disappeared, and the mammæ become quite flabby; countenance cadaverous, eyes sunken; lochia ceased altogether; the respiration hurried and anxious; pain extending down the thigh.—Twelve leeches were applied to the abdomen; a blister to the ileum; and the salines, with Dover's powder, resumed.

Tuesday.—Was sent for in great haste, supposing my patient to be *in articulo mortis.* On arriving, she had just recovered from a severe rigor: though excessively low and dejected, her countenance had assumed a more favourable aspect; she had had some refreshing sleep; her pulse about 120, and more regular; her thirst had diminished; tongue cleaner, and less dry; could bear pressure better, and had been lying on the right side for about three hours. The blister had risen well, and the pain in the thigh had nearly abated.—I continued the diaphoretic saline; applied a second blister to the sacrum; and allowed her a more generous diet.

Wednesday.—The bowels costive; had not acted since Tuesday forenoon.—Ordered a common cathartic enema.

Thursday.—Much better in general, although the pain had a little increased. The bowels had twice freely acted, from the injection.—I applied six leeches to the groin, and continued the saline.

From this time my patient became gradually convalescent, and in about six months after, on my meeting her, she told me she had again become pregnant, and feared the result; the more particularly so as she was obliged to leave London.

Remarks.—The attempt to recall labour-pains was injudicious, the life of the mother not being involved. Were the funis similarly situated in another instance, when endeavouring to bring down the feet, I should endeavour to hitch it on some member of the fœtus, to prevent fatal pressure on it, and to decrease the difficulty of extraction. Under similar circumstances, again, I would not be satisfied with one foot, as, when two are gained, which is done with comparatively as little pain to the mother, the fœtus is more speedily and readily expelled. In the subsequent treatment, I think much blood might have been spared, had blood to a larger amount been extracted at first, (viz. *ad deliquium.*) After the active inflammatory stage had subsided, the blisters gave evident relief. I think it but justice to add, that the circumstances of the patient were such as to preclude the possibility of a due attention to ventilation and cleanliness.

Cleveland-court, St. James's-place; July, 1824.

ART. VII.—*Case of Chorea, or Dance of St. Vitus, cured by the Carbonate of Iron.* By C. F. VANDEBURGH, M.D. Liverpool.

ANN LINDON, an interesting girl of fourteen years of age, was seized (agreeably to her mother's description, while engaged in her usual occupation of selling vegetables in the New Market,) with convulsive motions in the left leg and arm, to a degree that prevented her from walking. She dragged the affected leg after her: neither could she lift her hand to her mouth, without frequent attempts before she succeeded. She has tried numerous medicines and nostrums for upwards of three weeks, without benefit, but gradually became worse.

On the 1st of April, she consulted me. I found her labouring under confirmed chorea, distortion of the muscles of the face, violent convulsive motions of the head and extremities, with total inability to walk, or bring any thing to the mouth; the eyes were in constant motion; attended with an involuntary discharge of urine, likewise of saliva from the mouth, with loss of articulation; the abdomen prominent; bowels costive; pulse natural; appetite good. The involuntary motions continue during sleep; the mind was also considerably impaired.

Practitioners differ greatly in the treatment of this disease, some being advocates for electricity, others for depletion; and nearly the whole range of the Pharmacopœia has been exhausted even, in some instances, without success. But it is not my intention to tire my readers with a lengthened detail of the various methods of practice already adopted. I endeavoured to conquer the disease by purgatives, so judiciously recommended by

Dr. James Hamilton, and ordered the following mixture—℞. Magnesiæ Sulphat. ℥j. Infusi Rosæ ℥ij. Infusi Sennæ ℥iij. fiat mistura, cujus cochlearia tria magna quarta quaque hora sumantur, with the intention of cleansing the primæ viæ of their acrid contents, and continued it for eight successive days. The patient had seldom less than four or five evacuations daily, with no other success than removing the prominency of the abdomen, and rendering the fæces perfectly natural.

The 9th April, I commenced giving half a drachm of ferri subcarbonas, four times a-day, in molasses; and, if the bowels were costive, a small wine-glassful of the cathartic medicine before mentioned.

On the 17th April, the convulsive motions of the lower extremities were less frequent; intellects much improved. Ordered the subcarbonate of iron to be increased to two scruples four times a-day, and the patient to be immersed in the river every morning; which, notwithstanding the coldness of the atmosphere, she appeared to enjoy.

On the 24th April, I perceived great amendment: the involuntary motion had subsided during sleep; the eyes and features became more natural; articulation improved; and, without help, she felt able to walk a short distance. The ferri subcarbonas and sea-bathing were continued.

The 4th May, the power of speech was perfectly regained; the involuntary motions nearly subdued. The same treatment was pursued, accompanied with as much exercise as possible; and, on the 12th May, had the satisfaction of seeing her perfectly restored, and able to attend to her former occupations.

Liverpool; 15th May, 1824.

P.S.—Agreeably to Mr. B. Hutchinson's, of Southwell, mode of treatment, (to whom great merit is due,) I have also the pleasure of communicating, that I have given the ferri subcarbonas, in large doses, in two cases of tic douloureux. One, Mr. Potter, of Liverpool, who had suffered upwards of two years, (the complaint was perfectly removed in the space of a fortnight;) the other, Mr. Samuel, of the same place, who had only suffered a short time.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

Relating to the History or the Art of Medicine, and the Collateral Sciences.

Floriferis, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ART. I.—*Case of Laryngeal Inflammation,* by JOHN CRAMPTON, M.D. *where Tracheotomy was successfully performed by* RICHARD CARMICHAEL, Esq. M.R.I.A. one of the Surgeons to the Richmond Surgical Hospital, &c. &c.—(Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, Vol. IV.)

THE following case of laryngeal inflammation is offered to the Association, principally on account of the successful result of the operation of tracheotomy. It may be considered as an instance of acute laryngitis supervening on a chronic tracheal and bronchial affection. The operation has often failed, from the disease extending down to the different tissues of the lungs. In the present case, the recovery of the patient appears to be fairly attributable to the large opening, which not only allowed free inspiration and expiration, but permitted the mucous and other collections to be expelled without any difficulty or interruption. The event of this case, then, encourages us not to despond of the issue of tracheotomy, even when the disease has extended down the trachea into the lungs, and where from ordinary treatment we have nothing to hope.

Maria Dunne, æt. thirty, a strong woman, was admitted in the Whitworth Hospital, on the evening of the 25th October, 1823. Until the latter end of August, her health had been perfectly good: at that period, after exposure to wet, she was affected with a troublesome cough, accompanied with copious, tough expectoration. On being further exposed to cold, her cough became increased, attended with hoarseness and sore-throat. On the 21st October, she was first seized with oppression, difficulty in breathing, and a dull pain from the region of the larynx down along the course of the sternum. For these symptoms no appropriate remedies were resorted to: on the contrary, her friends advised spirituous liquors. A remedy so congenial to her feelings she indulged in freely for three days antecedent to her admission into hospital; after this excess, the symptoms were much aggravated. On the evening of her admission, her cough was frequent, with copious but tough expectoration; her breathing difficult, attended with a hoarse, brazen sound; her pulse accelerated. The usual purgative remedies were directed. Towards night, however, her respiration became so much obstructed, her countenance appearing anxious, pulse 100, whilst she experienced great difficulty in getting up the tracheal mucus, that

twelve ounces of blood were taken from the arm, and an expectorating mixture directed for her. She experienced immediate relief from the bleeding, soon after which she fell asleep, and passed a tranquil night.

26th.—The dyspnœa had returned. At the time of my visit, her chief complaint was pain in the region of the larynx; she pointed also to the scrobiculus cordis, as a place where she suffered considerable distress: pulse 112. A repetition of the bleeding was directed, also pills with ipecacuan and calomel every four hours, with a nitrous mixture. An emetic was ordered for evening. These remedies were all practised, but she had experienced no relief at eight o'clock in the evening.

27th.—In the morning there appeared to be an evident exacerbation of all the symptoms: the cough is increased in frequency, its sound is like croup; respiration difficult, and obstructed by a quantity of viscid mucus; pulse 120; pain in the region of the larynx and under the sternum, below the cartilagio ensiformis, distressing; she is, however, pale and exhausted. It was not judged expedient at this juncture to take blood from the arm, the distress appearing to be limited to a circumscribed space; but six leeches were directed to the region of the larynx, an emetic of ipecacuan, afterwards a continuance of the pills, with calomel and ipecacuan every four hours, besides the nitrous mixture. She was somewhat relieved after the leeches and the emetic; her pulse in the evening 126.

28th.—A very distressing night. At six in the morning, her pulse was very rapid and small; her countenance showed great anxiety; both inspiration and expiration required considerable exertion, and were accompanied with a wheezing noise; her bowels were free. Eight leeches were then applied to the exterior of the larynx, the other treatment being continued. From the report at noon, it appeared that she felt some temporary alleviation after the leeches: her countenance, however, was quite livid, and expressive of extreme anxiety, with a look of wild despair; her eyes protruded; respiration was nearly impracticable; the extremities, as well as the whole surface, were becoming cold; pulse fluttering and feeble, above 130. She was, however, in perfect possession of her intellect, and implored that something might be done to afford her relief under the extreme urgency of her suffering.

It was now evident that a termination to her existence was at hand, unless the organs of respiration were restored to a performance of their functions. The rima glottidis was, I presumed, nearly closed, and the quantity of viscid creamy mucus almost completed the obstruction. The conclusion I formed at this juncture was, that tracheotomy alone afforded any chance of saving the life of this patient. I directed, however, a continuance of the calomel and ipecacuan pills, and a cordial mixture. I requested also that Mr. Carmichael, on whom the surgical duty of this hospital devolved, should be immediately sent for, and that the operation, if it met his approbation, might be performed.

Mr. Carmichael soon arrived, and approving of my suggestion, immediately performed the operation of tracheotomy. On the opening being freely made, she experienced immediate relief. The irritation of the trachea, for a time, produced troublesome fits of coughing; after which, considerable quantities of purulent-looking mucus were expelled

the wound; the colour of her countenance was soon improved, and the temperature on the surface and extremities shortly became restored, without any additional remedial effort. Towards evening, having expelled much gross mucus through the wound, and the irritation in the trachea subsiding, she became composed: the frequency of the cough, however, prevented her from sleeping.—The same remedies were continued.

29th.—Is much better to-day: pulse 124, stronger and more steady; no longer feels the pain in the larynx or in the scrobiculus cordis;* even when the wound is stopped for a time, she speaks with more facility than previous to the operation. She breathes freely, and expectorates through the aperture; but, if the orifice is obstructed for any time, she feels great distress, and expresses considerable alarm at the idea of its closing. Cough is less frequent; she expels some mucus from the mouth.—In addition to her other remedies, an anodyne antimonial draught was directed at night.

30th.—She slept the greater part of the night without the opiate. Her voice, notwithstanding the wound is still open, has returned; the distress in the region of the larynx is greatly diminished; expels now more mucus by the mouth than by the tracheal aperture; pulse 120; countenance has resumed its natural appearance.—An expectorating mixture was directed to-day, (the calomel and ipecacuan being still continued,) and an aperient draught, as her bowels were slow.

31st.—Has slept a good deal. Cough abates, except after a long sleep, when the mucus collects; the irritation of this disturbs her: after coughing and expelling the greater part of the accumulation through the wound, she again falls asleep; pulse 116.—Medicines continued; beef-tea.

November 1st.—Still improves; breathes easy through the wound; pulse 120.—Calomel and ipecacuan omitted. To take the expectorating mixture and pills, with assafœtida at night.

2d.—Is to-day slightly feverish and flushed; pulse 120; edges of the wound are much inflamed.—Eight ounces of blood were taken from the arm; mixture with acetated ammonia and a purgative directed, the other medicines being omitted, and the low diet resumed.

3d.—Became cool shortly after the bleeding; pulse 98; cough less troublesome; wound little more healthy.—A cough mixture, with tincture of opium.

4th.—Slept well, breathing at times only through the mouth, unaccompanied by any hissing noise; pulse 90; appetite good.

5th.—Progressive in improvement; breathes naturally through the larynx. Wound allowed to close.

11th.—Her convalescence complete. Wound now quite closed, and begins to cicatrize. Respiration, as well as all the other functions, are performed naturally.

She was discharged, perfectly cured, from the hospital on the 22d of November, being detained longer than was necessary, on account of the

* This distress was probably in the heart, for want of its accustomed stimulus of renovated arterial blood.

peculiar interest of the case. In collecting the notes of this case, I have had much assistance from Mr. Lewry, the clinical clerk of the hospital. To his close attention, also, to this patient, next to the promptness with which the operation was performed, I am disposed, in a great measure, to attribute her recovery.

Mr. Carmichael's *Account of the Operation.*

The history and symptoms of Maria Dunne's case have been so accurately detailed by Dr. Crampton, that it is unnecessary for me to occupy the time of the Association, except by a simple detail of the steps of the operation of tracheotomy, which was performed a few minutes after I first saw the patient in the afternoon of the 28th October, 1823. Indeed, the difficulty of breathing was so great, that it was obvious there was but little time to spare; and my only doubt respecting the propriety of the operation arose from the apprehension that it was now too late to afford her even this chance of prolonging life, as I feared, from the rapidity of her pulse and appearance of her countenance, that effusion had already taken place into the lungs. However, the fortunate result of the measure tends to evince that, even in cases apparently extreme, success may follow its adoption.

With the assistance of the resident pupils of the Richmond Hospital, Messrs. Belton and Bushe, and Mr. Lewry, Dr. Crampton's clinical clerk, I proceeded to perform the operation; having placed the patient on a chair opposite a window which afforded a good light, her head being thrown back, and firmly supported by an assistant behind.

Having ascertained the lower edge of the thyroid gland, an incision, about an inch and a half in length, was made through the integuments from this point to within a finger's breadth of the sternum. The incision was continued between the sterno-hyoidei and the sterno-thyroidei muscles, until the rings of the trachea were fairly exposed. This momentous part of the operation was performed in a few seconds; for, with the aid of my assistants, who separated the lips of the wound by means of retractors, I was enabled to see the parts which it was necessary to divide; and, by the fore-finger of the left hand, I successively felt each part previous to the application of the knife, the edge of which, after the division of the skin, was directed constantly upwards during the subsequent parts of the operation; and these precautions were a sufficient security against wounding the arteria innominata, which sometimes rises above the sternum, or from dividing any known or anomalous arterial branch of magnitude which might course in front of the trachea.

This was all happily accomplished, with very little delay, and the loss of a very few drops of blood, notwithstanding the difficulty which the perpetual motion of the trachea opposes in a person incessantly gasping for breath. Two, or perhaps three, of the rings of the trachea were then divided from below upwards, and this opening was immediately widened by means of a large pair of sharp-pointed scissors, such as I employ for the operation of hare-lip. With these I had provided myself, knowing, from previous operations, the difficulty of removing by the knife a slip of the rings of the trachea, as recommended by Mr. Lawrence. Some little address is necessary in performing this part of

the operation. The sharp point of one blade was introduced at the lowest part of the opening in the trachea, and directed outwards so far as to admit, on the closing of the blades, of the division of an extent of the tracheal rings, equal to one-half of the opening already made in them: the flap thus made was laid hold of by a pair of dissecting forceps; the point of the scissors was again introduced into the trachea, where the last incision terminated, and carried inwards towards the central opening. Similar incisions in the same manner were made on the opposite side, and a diamond-shaped opening, capable of admitting the point of the little finger with ease, was left in the trachea.

The patient coughed up a large quantity of thick viscid phlegm through the opening, and seemed so much relieved, that the appearance of suffocation, and excessive anxiety which her countenance displayed previous to the operation, immediately disappeared. I am satisfied that, if the operation had been confined in this, as well as in other instances which have occurred to me, to a mere division of the rings of the trachea, that no beneficial result could have followed the measure; and that even the introduction of a tube, which is objectionable on two accounts, would not be attended with any advantage: for, first, a tube excites intolerable irritation, with violent fits of coughing; and, secondly, the apertures in it cannot be sufficiently large to permit the expulsion of the viscid phlegm, which accumulates in most of those cases where tracheotomy is necessary.

It has been suggested to me by a friend, that a pair of curved scissors, such as are used for operations on the eyes, would be better adapted for removing a portion of the trachea by means of two elliptical incisions. I have no doubt but that this part of the operation would be more easily performed in this way, but I doubt whether they would make an opening sufficiently large for the passage of viscid mucus; and it cannot but be of advantage that practitioners should be acquainted with a certain mode of effectually performing this operation by means of a simple instrument, which is always at hand. The successful result in the present instance sufficiently proves that the removal of a small portion of the trachea is not followed by any permanent inconvenience.

The only surgical attention afterwards necessary, was the frequent removal of mucus from the aperture in the trachea, by means of a probe armed with lint. The orifice, however, became frequently clogged, notwithstanding its large size, during the first week after the operation. The mucus was occasionally cleared away by the attending pupil, and even sometimes, when the patient expressed much uneasiness, by the nurse-tender of the ward, and in some instances by the patient herself with a sponge.

CRITICAL ANALYSIS

OF

ENGLISH AND FOREIGN LITERATURE

RELATIVE TO THE VARIOUS BRANCHES OF

Medical Science.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*The Principles of Forensic Medicine systematically arranged, and applied to British Practice.* By JOHN GORDON SMITH, M.D. Lecturer on Political Medicine. Second Edition, greatly enlarged.—8vo. pp. 569. Underwood, London, 1824.

[Concluded from page 148.]

WE have already adverted to some useful rules for the direction of the practitioner in his medico-legal capacity; these are more particularly detailed and applied in treating of the white oxide of arsenic, or *arsenious acid.* If we have not arrived before the death of the patient, or our efforts to effect recovery prove unavailing, our duty then is confined to determining the cause of death.

There are three circumstances to which the practitioner has to look to for proofs of poisoning by arsenious acid, and, indeed, of poisoning in general:—1. The symptoms under which the patient laboured; 2, the morbid appearances observed on dissection after death; and 3, the chemical examination of the contents of the alimentary canal, or of the matters which may have been ejected from the stomach before death. Our author gives an accurate description of the symptoms which usually characterize the action of arsenic, and the corresponding morbid alterations of structure discovered in the body on dissection: but these, he observes, however marked they may be, are not to be considered, alone, as sufficient evidence that poison was the fatal agent. Symptoms of a formidable character, and very analogous to those induced by poisons, sometimes result from diseases arising from other causes, which will occasion changes of structure, not easily distinguishable from those produced by mineral poisons.

The detection, therefore, of the poisonous article itself is the only indisputable proof of poisoning, and ought in every instance to be the grand object of our research. With this view we are to search for solid particles of the mineral in the stomach and

intestines; and, if successful, submit it to the action of the usual chemical reagents. The fluid and solid contents of the alimentary canal we must also treat in the same manner, not resting satisfied till we have finally reduced the poison to the metallic state. The production, by tests, of precipitates strictly answering to the account given of each, is but a preliminary step in the detection of arsenic: from all of them, when dried and calcined with potass and charcoal, the metal itself is to be obtained; and to procure this our labours must be directed. We must pass over what relates to the different chemical reagents employed as tests of arsenic, and will conclude this part of the subject by quoting the author's directions for conducting the inspection of the body in search of morbid appearances and the presence of the poison.

The practitioner, on such important occasions, should obtain the presence and co-operation of another professional man as soon as possible; and, if he is unaccustomed to chemical operations, he should avail himself of the assistance of some more expert or experienced person.

Although no great importance is to be attached to the external appearances presented by the bodies of those who have died from the action of arsenic, we are not to overlook them, and it is our duty to note those which may seem unusual. The interior research, however, is the important consideration, and this we cannot perform too scrupulously.

"The trunk of the body is to be carefully laid open, from the top of the thorax to the cavity of the pelvis, taking every precaution to wound no part of the alimentary canal. This being done, let the whole of the intestines be removed; which is to be accomplished by careful separation from their attachments; placing one ligature securely on the upper part of the œsophagus, a second on the lower part of the intestinum rectum, and a third on the vessels that pass between the duodenum and the liver, whereby every possible precaution will be taken to guard the contents from escape. If we discover preternatural perforations in the stomach or elsewhere, ligatures, even if practicable, might be improper: we must endeavour to avoid the loss of substance through them, by attending to the position in which they are maintained during the process of dissection; and clean sponges may be applied, to prevent, as much as possible, the fluid from spilling, and, by absorbing, to preserve what portion does make its way through.

"While this is going on, a large earthen vessel, of a capacity sufficient to receive the viscera, should be prepared, perfectly clean and dry, to which the whole intestinal canal is to be transferred without delay.

"Other vessels of the same kind, though not necessarily of equal dimensions, are also to be got ready; and the alimentary canal being laid open throughout its whole extent, the fluid contents are to be placed in one vessel, and the solid in another. The intestines are then to be washed in warm distilled water, and the product of this also is to be

carefully set apart. These precautionary steps being taken, we proceed to search accurately for lesions of structure, and morbid appearances; and whatever may be discovered in this way should be correctly noted. Eschars, gangrenous, inflamed, and perforated spots, Orfila recommends to be removed, with a portion of the parts around them, and placed in alcohol.

"The preliminary preparations for a chemical examination having been arranged, we now proceed to analyze the various substances obtained. In the first place, we must search for solid particles of the arsenious acid, and, if we find any, let them be tried in various ways. If the search for these be unavailing, our attention must be directed to the contents of the alimentary canal in general; and it will be a convenient rule to keep those of the stomach separate from the rest.

"M. Orfila directs that the solid part of the contents should be boiled in ten or twelve times its weight of distilled water for one hour, renewing the water as fast as it flies off in vapour. This liquor is to be cooled, and decanted from the residue before the tests be applied. But, as the degree of solubility of arsenious acid in water at the boiling point, is stated by Orfila himself to be as one part to fifteen of water,* I should think that the success of the experiment would be better insured, were the quantity of water greater than here recommended, even although the proportion of arsenic contained in the mass to be boiled should be small.

"With regard to the application of tests, the safest rule will be to divide the substance to which they are to be applied into separate portions, and the more tests we apply upon the whole, the better; provided we apply them properly, and do not dispose too liberally of a quantity of the suspected substance, insufficient to enable us to proceed all possible lengths with it. We shall often find portions of the poison unchanged. The fluid part of the substance rejected from the stomach should be filtered, and the tests applied as to any other solution. The solid matter may be partly dissolved in distilled water, filtered, and tried in the same manner; or dried and submitted to the test of heat; to which, indeed, the precipitates themselves, obtained in the other steps of the experiment, should ultimately be referred, for this is the only sure method; the object being not to produce merely precipitates of certain colours, by the application of certain articles.

"The final result of the reduction of arsenious acid to the metallic state, may be obtained by simply evaporating the fluid to dryness, and subliming the residue. This may be very properly done with a portion of it, where it is abundant enough to admit of variety in the experiments. But, in all cases, the practitioner will do wisely to apply the chemical tests, and note accurately the results of precipitation, as to rapidity of appearance, quantity, and colour.

* * *

"But we have not yet exhausted the whole of our means of detection. The judgment of the practitioner, with regard to the success of the processes already detailed, may lead him to decide that he need not

* *Toxicology*, vol. i. p. 103.

proceed with what remains to be explained. It will be recollected that it was enjoined to preserve the portions cut from the intestines in alcohol. If all our experiments on their contents fail, we should take these portions themselves, and, after drying them, combine them with potash and charcoal, and subject them to heat, with a view to obtain metallic arsenic by sublimation.

* * *

"The great, the safe, and indeed the inevitable, principle to be kept in the mind of the practitioner, with regard to the detection of metallic poisons, and of arsenic in particular, is this:—Any one test is but corroborative of the rest; therefore, a plurality should be employed, from the concurrent results of all which only will his opinion be warrantable, and receivable as evidence: and that the metallization, where the quantity of the poison is sufficient to enable him to go that length, must never be omitted; otherwise, his conclusions will be subject to animadversion, at least, if not to rejection. It was upon this point that the important trial at Launceston turned, and the principal evidence, though perhaps (in the estimation of scientific men) satisfactory enough, went for nothing in that of the jury." (Pp. 98—105.)

The other preparations of a metallic nature, which possess a poisonous quality, are treated in the same manner as those of arsenic. Many of them are extensively employed in medicine, and unfortunately, when imprudently administered, have sometimes been found to act as poisons, instead of antidotes: some have been employed with criminal intentions, and numerous instances of serious consequences have resulted from others being swallowed through accident or inattention. The mode of proceeding in the detection of arsenic is applicable to them. The peculiarities in the chemical and toxicological history of each individual article are discussed by the author, with the requisite minuteness and precision.

The concentrated acids, the sulphuric, nitric and muriatic, as objects of toxicology, are next considered; and the alkalies, earths, and the neutral salt, nitre, conclude the subject of mineral poisons.

The *vegetable* kingdom contains more individual poisons than all the rest together, but they are less employed, either with a criminal intention or for the purpose of self-destruction, than those of the mineral kingdom. The taste, colour, and other sensible qualities belonging to plants, throw an obstacle in the way of attempting the life of others; and the comparative difficulty of collecting them, and afterwards preparing them into poisons, prevent their being so frequently resorted to by those who are weary of existence. They are often, however, the accidental cause of death.

In investigating vegetable poisons, with the view of ascertaining the particular article concerned, the practitioner will meet with difficulties which are not presented by the mineral poisons.

By chemical processes he may be able to resolve the vegetable into its elementary principles, and yet not be able to say more than that vegetable matter is concerned. Analysis will not enable him to determine the particular plant on which he is operating, and synthetical proofs fail him entirely: the constituent principles he may obtain, but he cannot, as in the case of minerals, recombine these so as to reproduce the original plant. Here, as our author observes, organization opposes a barrier to our creative powers.

Notwithstanding, however, that in our researches we are so far deprived of the aid which chemistry affords in the other case, the investigation may be carried on with less trouble, and, in most cases, may be brought to a sufficiently satisfactory conclusion, by attending to certain circumstances connected with the nature of vegetable poisons, and their effects on the constitution. The practitioner should, therefore, be well acquainted with the habitats, the botanical characters, as well as the sensible qualities, of plants belonging to this department, both in the recent and organized state, and in the various forms of powder, tincture, extract, &c. which they are usually made to assume.

The sensible properties of vegetables (which furnish the principal means of detection) are not so readily destroyed as those of minerals: they remain longer unchanged in the alimentary canal,—a peculiarity which affords not only a better chance of recovery to the patient, but greater facility of recognizing the deleterious article in the matter vomited, or contained in the stomach and intestines. Vegetable poisons also differ from the minerals, in not acting chemically on the living solids to which they are applied; not destroying organic texture, otherwise than through the medium of the inflammation which those of an acrid nature excite; no article of this kingdom (if we except one, oxalic acid, derived from it,) being referable to the class of corrosive poisons: they are, consequently, more simple in their effects. Some of them, as the lauro-cerasus, act immediately and powerfully on the nervous system, proving speedily fatal, without leaving any discoverable trace of their action. Symptoms, in this case, claim more consideration as proofs of poisoning, than when we are dealing with articles of the mineral kingdom, where the certainty resulting from the application of chemical tests renders other modes of investigation less essential.

The individual articles belonging to the vegetable kingdom are discussed in the order of the six classes to which the mineral poisons were referred. The most important of these classes is the narcotic; and opium, being the article which most frequently forms the subject of medico-legal inquiry, holds the first rank. The means of detecting this poison resolve themselves into the observation of symptoms, examination of the ingesta, morbid

appearances, and the history of the case. The post-mortem appearances do not of themselves afford any very satisfactory proof of the agency of this poison, but, in a pathological and practical point of view, they are important. Slight marks of inflammation of the stomach have been discovered in those who have been poisoned by this drug, but the most prominent phenomenon has been general congestion of blood in the internal organs. The brain, lungs, and heart are described as *loaded* with black blood. These appearances, and the corresponding symptoms during life, undoubtedly indicate the propriety of abstracting blood; and some recent cases of the successful application of this practice are referred to by the author.

The discussion of *animal* and *septic poisons*, in the relation which they bear to medical jurisprudence, concludes the Chapter on Poisoning. In this respect they are less important than those of the two preceding departments of nature, and consequently are not so fully treated of.

The Chapter on *Suffocation* includes every variety of death resulting from impeded respiration, whether induced by exposure to another aerial medium than that of the respirable atmosphere, as in the case of *noxious inhalations*, or to a denser medium which cannot be admitted by the organs of respiration, as in *drowning*, or by mechanical obstruction to the admission of the respirable air into the lungs, as in *hanging*, *strangling*, and *smothering*.

When respiration is impeded under any of these circumstances, unoxygenated blood is sent to the brain, upon which it exerts a most deleterious influence: in a short time the circulation through the lungs is arrested, and accumulation of blood takes place in the venous system, while the arterial is empty. This theory of the mode of death in suffocation is supported by the appearances observed on dissection. The lungs are found of a deep-blue colour, gorged with blood, with extravasation into the air-vessels; a similar congestion is found in the right cavities of the heart, extending to the neighbouring veins, the cavæ, the jugulars, and their ramifications, causing turgescence, and sometimes rupture, of the vessels of the brain, and lividity of the surface, particularly of the face and breast.

The notice which our author gives of the noxious gases is rather too brief, considering the frequency of death from these agents, and the judicial and professional investigation to which they give rise. Such occurrences are generally made the subject of inquiry before the coroner, and sometimes a suspicion of murder is attached to them, till medical testimony explains the real nature of the event.

Our author's observations are chiefly confined to carbonic acid. This gas is produced naturally in some places, to a sufficient amount to prove fatal; but its deleterious effects are more

ordinarily witnessed where the combustion of charcoal is going on without the renewal of atmospheric air,—as in close apartments, in the cabins of ships, in lime-kilns, &c.; it is also accumulated to a dangerous extent in cellars, wells, breweries, and green-houses; it forms the *choak damp* of coal-mines; and, as the product of animal respiration, it is the cause of the deterioration of the atmosphere of confined places in which a number of people are crowded together, without an adequate supply of fresh air, as happened in the catastrophe of the Black-hole at Calcutta; and in this country a few years before that event, when the keeper of St. Martin's watch-house forced twenty-eight persons, of whom four were suffocated, into a place called the Hole, not above six feet square, and scarce five feet ten inches high.

Various opinions prevail as to the manner in which this gas proves fatal. Some maintain that it is not inspired, but causes a constriction of the glottis, and kills in a way analogous to drowning. This is true of the pure gas, which Sir H. Davy was never able in his experiments to inspire, when unmixed with common air; but, when diluted with atmospheric air, it may be breathed, and in general, when it proves fatal, it is thus diluted. Some suppose that, when inspired, it acts negatively, by excluding the oxygenated air; and this opinion is in some degree supported by the circumstance, that the subject frequently recovers as soon as he is removed into fresh air: but there are other observations which favour an opposite opinion, that it is positively deleterious,—particularly the cases related by Dr. Babington and Dr. King, in which the effects of charcoal vapours were very general and permanent, and in some of them ultimately fatal.

During the combustion of humid charcoal, besides carbonic acid, there is evolved another gaseous compound, hydrocarbonous acid, or the heavy inflammable air and hydrocarbonate of the earlier chemists. This gas is decidedly deleterious, as appears from the experiments of Sir H. Davy, who, with a boldness bordering on rashness, inspired it nearly pure. In him it produced very alarming effects: on the first inspiration, numbness of the chest, with head-ache; then dreadful oppression and insensibility; and on the third inspiration he thought he was sinking into annihilation, and had only power to drop the mouthpiece from his unclosed lips. These effects were not merely transient; very disagreeable sensations remained for several days.

Our author does not take any notice of carburetted hydrogen, the *fire-damp* of coal-mines, and which is frequently the cause of fatal accidents, by exploding when ignited, and suffocating when inspired; nor of sulphuretted hydrogen, which is generated

in such abundance in sewers, privies, &c. as to prove dangerous to persons employed in emptying them.

In treating of *drowning*, our author, after enumerating the ordinary appearances observed in the bodies of those who have been drowned, and giving what is at present considered to be the most correct view of the *ratio moriendi* in this kind of death, proceeds to consider the subject in its relations to forensic medicine, or the various questions which, in cases of doubt, require medical testimony for their solution. It may, in this way, become matter of inquiry whether a body, found under circumstances leading to a suspicion of drowning, was really drowned, or placed in the water after death; whether the person was first killed, and then thrown into the water by the assassin, to conceal the crime; or whether the deceased fell into the water subsequent to death from accident, disease, or suicide; and, lastly, whether the drowning (supposing the fact to be satisfactorily established) was voluntary, accidental, or forced.

The most important of these is, whether the person was alive or dead when submersed; a point which, in the absence of moral evidence, is to be determined by a careful examination of the body, with the view of discovering the usual marks of death from drowning, or such indications as may prove it to have been caused in some other way.

This subject has given rise to much discussion in courts of justice, and great discrepancy of opinion among professional witnesses. The difficulty of coming to a right conclusion is chiefly owing to the uncertainty of the signs of drowning; a difficulty acknowledged by all writers on the subject, and which has led some to think that the decision of such questions is not determinable by medical testimony. We were, therefore, not prepared for the observation of our author, "that great difficulty need not occur in declaring whether a person has been submersed while alive, or thrown into the water after death;" a conclusion scarcely warranted by the preceding detail of the signs of drowning, which are given with the author's usual accuracy and fidelity: for the presence of water and frothy mucus in the air-passages is not uniformly observed; and, when present, these marks are so appreciated as to lose much of their value as affirmative proofs; for the trifling quantity of water which is occasionally met with in the trachea, if in its natural fluid state, is supposed to enter after death; and, as to the frothy fluid, it may be a question whether it is not the produce of the bronchial membrane from previous disease, or secreted during the struggles of death from other causes. The proofs of death before submersion, which the body presents, are the presence of morbid lesions, traces of poisons, and the absence of those signs which usually denote drowning.

Notwithstanding all that has been written on drowning, and the many observations recorded and experiments instituted, with the view of explaining its pathological physiology, and assisting judicial inquiries, it is a subject still involved in considerable obscurity and difficulties, and requiring further investigation.

The remaining subjects of this chapter, *hanging*, *strangling*, and *smothering*, are treated in the same order observed while discussing that of drowning. We are presented, in the first place, with the characters which denote these modes of death respectively, or indicate a different mode of death from that assigned; and, secondly, the circumstances which are to be taken into account in determining the event to have been the result of homicide, suicide, or accident. Our limits will not permit us to follow our author in his details and discussion of these points; but they are full and satisfactory, and illustrated by several interesting and instructive cases.

The last chapter of this section of the work is devoted to the subject of *Wounds* and *Bruises*, injuries which constitute the most common causes of violent and accidental death, and furnish the most frequent occasion for the appearance of a medical witness in a court of justice. These may become the object of medico-legal investigation, either before the final event of the injury, or after death or recovery. In the former case, the witness will be required to describe the nature of the injury, and to pronounce on its tendency and probable consequences. In the latter case, he will have to state, where a fatal termination has taken place, the characters of the injuries found on the body, —whether they were inflicted during life,—whether they were the cause of death,—and, if so, whether they are to be charged to the account of suicide, homicide, or accident. In the event of recovery, he will be required to determine what degree of inconvenience or damage the patient has sustained.

The circumstances to be considered in forming an opinion of the consequences or danger, remote as well as immediate, of inflictions from external violence, are comprehensively detailed by the author, in some general preliminary observations. These refer principally to their characters, whether incised, lacerated, or punctured, &c.; their complication and extent; the parts of the body implicated; the modifications arising from peculiarities of constitution; the patient's state of health previous or subsequent to the receipt of the injury; and the mode of treatment pursued.

If the surgeon is required to be careful in his observation, and minute in his detail of circumstances, while the event is yet undecided, he is expected to be no less particular when the dead body is the subject of investigation. With reference to this

part of the practitioner's duty, our author's observations relate chiefly to the mode of conducting the post-mortem examination, —the cautions to be observed in dissection,—the various particulars to be noted in his report,—and the physiological and pathological knowledge required of him in distinguishing morbid appearances from those of the healthy state, and estimating, in complicated cases, how far death is chargeable to the progress of disease or the effects of vulnerary lesions. Lastly, the circumstances which determine whether a wound was inflicted during life or after death are considered, with the discriminative characters of the discolorations which take place from animal decomposition after the extinction of life, and those which are caused by bruises on the living body.

The practical application of the foregoing and some additional observations, of importance in a judiciary point of view, will be found more particularly illustrated in the sequel, when the author is treating of wounds in the order of the parts of the body in which they are inflicted,—as the *head*, *neck*, *thorax*, and *abdomen*. *Gun-shot* wounds, as they possess some peculiarities, are treated of separately.

Death from spontaneous personal agency, or suicide.—In all cases of self-destruction, however evident it may be that the deceased deprived himself of existence, it is the custom to have the manner of death, and the fact of suicide, verified by professional testimony. In such cases the duty of the practitioner is comparatively easy; but there are other cases in which the investigation is attended with more or less difficulty. Instances occur in which a person takes away his own life, where his friends, naturally wishing to conceal the fact, will attempt to hide the real state of the case by ascribing the event to natural causes; and it may be the interest of survivors, as in cases of life-insurance, to establish that a person died from disease, when suicide is alleged or suspected: but the most important question, and the one which more frequently presents itself, is between *homicide* and *suicide*. The discussion of this subject is necessarily narrowed by the ample consideration bestowed, in the preceding section, on the different species of violent death, in their various bearings; but there are several circumstances to which our attention is here more particularly directed, as tending to elucidate the question between suicide and homicide. These are both of a moral (or circumstantial) and physical nature, and are introduced under the heads of *suicide*, by *poison*, *drowning*, *hanging*, and *wounds*.

Prolicide.—By this new term the author designates the destruction of the fœtus in utero, or *fœticide*, involving what is commonly called *criminal abortion;* and the destruction of the new-born infant, or *infanticide*.

Abortion.—The wilful and malicious procuring of abortion, or the administration of medicines, or any other means, *with that intent*, varies as to the degree of criminality attached to it by the law, and the punishment awarded, according to the stage of pregnancy at which the attempt is made: before the period of *quickening*, the criminal is considered guilty of felony, and liable to transportation for fourteen years; after quickening, the crime is punishable with death. Though this distinction is founded on the manifestly erroneous notion prevalent amongst the vulgar, and formerly believed by physiologists, that the embryo had no separate principle of animation till the period of quickening, yet, as it still maintains in law, considerable importance attaches to every variety of circumstances under which the procuring of abortion may call for investigation. On this account, the author enters into a detail of the growth of the embryo, and the various changes which it undergoes in its progress, from the earliest period after conception at which it is perceptible, to the completion of the seventh month, when it has acquired such a degree of development and perfection, as to render it capable, if separated from the mother, of being reared and attaining to old age.

The author lays it down as a general fact, the rare exceptions to which scarcely deserve consideration, that under the fifth month no fœtus can be born alive; from the fifth to the seventh month, it may come into the world alive, but cannot maintain existence. These are termed by the French *non viable*, by our author non-rearable, or *immature*,—in distinction to those born between the seventh and ninth month, which may be reared, and are merely *premature;* a child carried to the full period of utero-gestation only being considered *mature.* The term abortion is confined to the expulsion, which necessarily implies the destruction, of the *immature* fœtus; the question relating to the extinction of its life after the seventh month, being considered as properly belonging to the subject of infanticide.

The duty of a medical jurist in a case of abortion resolves itself, first, into the ascertaining of the reality of the event; and secondly, the determining whether it has been caused by natural means or improper interference. In conformity, therefore, with this view of the inquiry, the author goes into a detail of the phenomena of abortion; the causes existing, either in the mother or in the fœtus, which, without question of culpability, may induce it; and, lastly, the various means resorted to with a criminal intent. The different methods employed in order to excite the expulsion of the immature ovum, are considered under two heads,—those which act through the system of the mother, such as powerful medicines; and those which are at once applied to the uterus, such as violence and blows externally

inflicted, and mechanical irritation directly applied to the uterus by means of instruments purposely constructed, or other expedients. The charge of resorting to these criminal means may affect the mother alone, or she may be an accomplice in the crime; but we must not forget that she may be altogether unconscious of the nefarious attempt practised upon her, and deceived to take medicines, in the persuasion that she labours under a natural disorder.

Infanticide.—The murder of a child newly born, or about to be born, has not only been visited with the severest punishment when proved, but until very lately, in this country, was punishable with death when only presumed. By a law passed in the reign of James I. it was enacted that *concealment of the birth* of a child, which, if born alive, would have been a bastard, was to be accounted satisfactory proof of murder against the mother; and the evidence of one witness, at least, was required to establish the fact of such a child having been born dead. The extreme severity of this law, which defeated the purpose of its enactment, led to its repeal in the last reign, and the trials of women charged with the death of their offspring are now conducted on the same principles as other trials for murder; the jury, in cases of acquittal on the capital charge, having the power of finding, if made out in evidence, the fact of concealment of birth, which is punishable with imprisonment. To prove concealment of birth, it may be sufficient to ascertain that there has been a pregnancy or a delivery: to establish the guilt of child-murder, the body of the infant supposed to be murdered must be found. In either of these cases, the testimony of professional men may be required to establish points of the greatest importance to the parent, or others who may be implicated in the act of accusation.

In a case of alleged infanticide, it may be necessary to establish by professional men that a child has really been born alive, and that delivery has been suffered on the part of the mother. The consideration of the latter topic belongs to the subject of Pregnancy, where it is fully treated of by the author. With regard to the body of the child, the first thing to be inquired into is—whether the fœtus had been so long carried in the uterus as to attain sufficient powers to support life when separated from the mother: if it be established that the infant could not have maintained itself alive out of the maternal womb, or, in other words, that it had not reached the end of the seventh month of utero-gestation, the charge of murder must fall to the ground; for, though a fœtus may come into the world alive before this period, experience has taught that it cannot continue to live. It is of the highest importance, therefore, to establish whether the fœtus has or has not passed the seventh month.

This leads the author into a detail of the peculiarities which distinguish the *immature* from the *rearable* and *mature* fœtus: such as the weight of the body, its measurement, colour, texture, disposition of the viscera, &c. If, again, the child is ascertained to be of the full term of utero-gestation, or so nearly approaching to it as to have been rearable, the questions for our solution are, whether it came into the world alive, and, if it did, what has been the manner of its death.

The appearances which the body presents when the child has been dead for some time previous to birth, are not to be overlooked; but what we must chiefly ground our opinion on, is the peculiarities in the circulatory and respiratory systems before and after birth. Hence the author presents us with an account of the mechanism of the circulation in the fœtus, and the anatomical peculiarities observable in the condition and appearance of the lungs and heart, compared with the changes which they undergo, and which are perceivable immediately after respiration has commenced. These afford the material evidence for concluding whether a child has been born alive or not, but each of the tests which they furnish has been the subject of objection and dispute among medical writers. The force of these objections the author thinks is greatly over-rated, and he is of opinion that much of the uncertainty alleged to belong to the subject of infanticide, has arisen from the acknowledged difficulty and labour of the necessary investigation, as well as the natural bias in the mind of the professional witness to favour the accused. On this account, he enters into a full examination of the various proofs afforded by the state of the lungs,—such as their specific gravity, or the *hydrostatic test;* their absolute weight, or the *static test;* and the proof proposed by Daniel, drawn from their *bulk.*

The *hydrostatic test* is founded on the difference of specific gravity, compared with that of water, between lungs that have respired and those that have not been distended with air. If, in the former case, they are thrown into water, they will float; and in the latter, they will sink: if we remove the lungs from a still-born fœtus, and place them in a vessel of water, they will sink to the bottom; but the lungs of a child that has made one inspiration will be buoyant. This fact, which was known as early as the time of Galen, was not applied to the elucidation of the subject of infanticide till the year 1660; from which time it was long considered a satisfactory test as to the birth of a living or dead child. Subsequent observation, however, having pointed out some fallacies to which the experiment was liable, and objections being raised to it, practitioners seem to have passed from the extreme of implicit reliance to that of unqualified distrust in its validity; and it has lately been declared in a court of

justice, (and the authority alleged for the opinion is professional testimony,) to be not only absurd, but one that has been long exploded. Our author, however, while he admits that the test is too often applied in an absurd manner, contends that the real cause of the neglect of it is neither the absurdity of the thing itself, nor any authorised suppression of the practice, but rather a want of ability or of inclination to undertake the experiment as it should be performed. He then proceeds to a candid detail and examination of the principal objections that have been urged against drawing conclusions from the buoyancy of the lungs in water, and, after making what we conceive to be a fair estimate of their force, decides, with the best writers on juridical medicine, in favour of the validity of the test, provided the experiment is properly performed, and due regard is paid to all the circumstances which are said to disturb, in certain cases, the uniformity of the result.

The *static*, or *Ploucquet's test*, founded on the difference in the absolute weight of the fœtal lungs, compared with that of lungs which have respired, was first applied to the detection of infanticide by Professor Ploucquet; and hence it generally bears his name. While the *specific gravity* of the lungs is diminished after respiration has commenced, their *absolute weight* must be increased from their receiving a larger supply of blood, in consequence of the change effected in the distribution of the circulation. Ploucquet, from the observations and experiments which he made, stated that the weight of the lungs of a full-grown fœtus which had never respired, was to that of its whole body as one to seventy; while in new-born infants, after respiration had been established, it was increased to two to seventy, or as one to thirty-five,—that is doubled. These experiments seem to have been too few to warrant the establishment of a rule from them; and of this Ploucquet was fully aware, for he expressly observes that his test cannot be received as an established proof, until a greater number of trials shall have been made,—their results accurately recorded,—and even a scale of proportions deduced between the absolute weight of the lungs and that of the bodies of children born at different periods of gestation. The subject has not been prosecuted, in this country at least, with the attention which it deserves; for, though no standard which can be implicitly relied upon has hitherto been established, yet, as the test rests on an incontrovertible physical law, it ought never to be neglected, because, admitting that several circumstances may alter the absolute weight of lungs that have not, and of those that have respired, a difference will still be found, which, when joined with the results obtained from the hydrostatic experiment, will furnish an additional link in the chain of professional evidence. The same may be said of

Daniel's proposed test, which is derived from the bulk of distended lungs, compared with that of lungs which have not respired.

Having largely discussed the proofs by which we are to verify the fact of the child's having been born alive or dead, the author next enumerates the various means by which it may have come by its death: whether chargeable to *omission*, or the neglect of those aids and precautions which the new mode of existence, as well as the feebleness of the infant, render essential; or to *commission*, or actual criminal interference; and concludes by calling our attention to the practical application of the foregoing facts and discussions.

The manner of conducting the inquiry in an alleged case of infanticide, is detailed with the precision and minuteness which the importance of the investigation imperiously demands. Before proceeding to the anatomical investigation of the body, the practitioner is directed to take an account of the adventitious circumstances and appearances about the child,—as the nature of the situation in which it was found; the state of the body as to filth or blood, &c. Its weight and measure is then to be ascertained, with a view to fix the probable period of utero-gestation. The presence or absence of putrefaction is also to be noted, or evidences which it may present of having died in utero, and having been afterwards detained there for some time. The surface of the body is then to be carefully examined, in order to detect any ecchymosis or wounds, particularly about the fontanelles and sutures of the head; and, as fatal luxations may exist, the state of the neck and cervical vertebræ is next to be inquired into, and the condition of the umbilical cord carefully observed.

In exploring the interior cavities of the body, much patience, deliberation, and order, is inculcated. By determining the import of one appearance, or the state of one organ, before he proceeds to examine another, the labour of the practitioner will be considerably abridged; and, what is of greater moment, the object of his research will be more effectually promoted.

After tracing the different steps of the examination of the body, in the order which ought to be followed, and laying down particular directions for conducting the experiments to which the lungs must in every case be submitted, the author concludes this part of the subject with briefly recapitulating the import of the appearances supposed to have been discovered.

"If the diaphragm be very convex towards the thorax; and the lungs of a dark-red colour, retracted from the anterior part of their cavities, not covering the pericardium, of a firm consistence, sink in water under every variety of trial, emit no sound when cut into, and effuse no blood; when, along with these circumstances, blood is discovered in the ductus

arteriosus, and the foramen ovale of the heart is open, the conclusion must be that respiration has never been performed. On the other hand, if we find that the lungs fill their cavities, are of a pink or light-red colour, elastic to the touch, swim high in water, make a crepitating noise, and pour out florid blood on cutting into them, we have considerable proof that breathing has taken place: and if to these we should be able to add the corroborative result as to absolute weight, the mass of physiological evidence will be strong indeed. The mere fact of respiration not having been performed, is not, it seems, to be received as evidence that the child was not born alive. In this case, all we can do is to declare that we can throw no further light on the matter from professional research, and leave it to law and justice to deal with the case in their own way. We should nevertheless continue the dissection, as we may, perhaps, ascertain more positively from other appearances whether the child could have come into the world alive.

"If we discover that breathing has been performed, and consequently that the child has lived after birth, we are to pursue the investigation with a view to discover the cause of death; and, in its further progress, it will be conducted on the same principles as those that should guide us in examining the bodies of grown-up persons under suspicious circumstances. By keeping in mind the causes of violent death, we shall make a right use of the remaining parts of the body. (p. 378—379.)

Though the author is anxious to establish the incontestible character of the evidence which, in cases of infanticide, the skilful practitioner may draw from a careful examination of the body of the child, the reader will be gratified to find that his zeal is not restricted to the ungracious task of establishing the commission of a crime. In an article expressly dedicated to the subject, and in his account of the natural course of a concealed pregnancy, the author urges, with much force and feeling, various considerations in favour of the accused, which the practitioner should not overlook, and some of which are of essential importance as evidence; particularly the fact of the unexpected supervention of labour, and the sudden expulsion of the fœtus in situations where it may meet with instant death. A child coming into the world under these circumstances may receive such violence, by falling against hard bodies, &c. as shall immediately deprive it of life: the woman may not be able to give immediate alarm of the event; or, if the offspring is the consequence of illicit amours, believing that no assistance can avail in restoring it to animation, the idea of concealment for the sake of her reputation will more naturally arise; but, on the discovery of the corpse with marks of violence upon it, suspicions will as naturally attach to her, though guiltless of its blood.

The fact of delivery by surprise being unquestionable, we are bound to admit the possibility of the death of the child happening in this way, without interference or wilful neglect on the

part of the mother, from violent contusions, suffocation, or rupture of the umbilical cord and fatal hemorrhage. We are also directed to allow their due weight to those appearances which are sometimes the consequences of a severe and protracted labour, and take care that we do not confound them with the effects of voluntary violence. In the prosecution of this topic, indeed, the author omits nothing which may operate in favour of the unhappy mother: even matters of a circumstantial nature, and, strictly speaking, extra-professional, which militate against her being guilty of such an unnatural crime, are pointed out for our consideration,—as her having made preparations for the care of her future offspring: thus the plea of delivery by surprise receives confirmation, if baby-linen be found in her possession.

We shall conclude the subject of infanticide with the introduction of a note from the author, on an erroneous notion, pretty prevalent among the vulgar, as to the lawfulness of getting rid of monsters as soon as they come to light:—

"It can hardly require discussion, but it may be adverted to in this incidental manner, that persons have conceived it warrantable to destroy infants born with such defects or monstrosities as to render their continued existence impossible, or their death desirable. Without arguing against the unwarrantable nature of the notion, I shall merely quote the observation of a learned judge at the York assizes in 1812, when two women were tried for drowning a child that was born with a deficiency in the cranium, in consequence of which it was likely that it could not survive beyond a few hours. There was no concealment on the part of the prisoners, one of whom was a midwife, and bore an excellent character for humanity. 'I think,' said his lordship, 'this prosecution may be of great use to the public, in removing an erroneous opinion, that the law allows the right of deliberately taking away the life of a human being *under any circumstances whatever*. It is, therefore, highly necessary that the contrary should be known.'

"The performance, however, of embryotomy, in order to save the life of the parent, (at least until the Cæsarean operation, or some other alternative, is established,) must not be considered as prohibited even by this statement from so high a quarter." (P. 384, *note.*)

The chapter on Infanticide is one of the most ably written in the book. The subject is presented in its most interesting aspect, and is treated with great power and impartiality. The rules laid down for conducting the investigation which justice demands will, if properly attended to, divest this sort of inquiry of many of its real and gratuitous difficulties, and lead to more satisfactory results than we are daily in the habit of witnessing.

With the subject of infanticide we shall also conclude our extended analysis of Dr. Smith's work. We wish we could follow our author through the other interesting topics which employ his pen, and which, though not equally important with

the subjects already discussed, affect (many of them at least) interests of no small moment to the welfare and security of society, as well as the comfort, reputation, and liberty of individuals. The importance of questions involving the extinction of life under every variety of circumstance that may lead to judicial investigation, appeared to us to point them out as the subjects affording the best evidence of the qualifications of our author for the task in which he engaged. The specimens with which we have presented our readers have, we hope, borne us out in the favourable opinion we expressed at the commencement of the article, of the manner in which the work is executed. One reason of the incomplete view we have given of the subjects on which we have touched, consists in an excellence of the author to which we are glad to testify,—viz. the terse and compressed style in which he writes, and the total absence of expletives and repetitions, which render abridgment difficult, but, we need hardly add, constitute a valuable quality in a work of this kind. Those only who have attempted to peruse the ponderous and voluminous tomes on juridical medicine, which have issued from the continental press, can duly appreciate, and thankfully acknowledge, the labour and skill which has compressed into a comparatively small compass all that is valuable and satisfactorily established on the subject. As a book of reference in cases of difficulty and emergency, it will prove a valuable acquisition to the practitioner; and its merits as a composition entitle it to be registered as a creditable accession to British medical literature.

The remaining subjects, which are amply discussed by the author, but which we are obliged to pass over without any particular notice, are—Chap. II. Questions arising from injuries done to the person, not leading to the extinction of life, as *maiming* or *mutilating*, *surgical operations*, *corporeal punishment*.—Chap. III. Disqualifications for performing social or civil functions, as moral disqualifications, comprehending *mania*, *melancholy*, and *fatuity;* physical disqualifications for *general purposes*, for *military service*, and for *marriage*, &c.—Chap. IV. Miscellaneous questions, as *utero-gestation*, *sexual ambiguity*, *personal identity*, *survivorship and insurance of lives;* with some observations on *medical evidence*, the usages of courts of justice, and the manner in which the medical witness should comport himself there, and deliver his opinion.

ART. II.—*Observations illustrative of the Nature and Treatment of the prevailing Disorders of the Stomach and Liver.* By THOMAS JOHN GRAHAM, M.D. Member of the Royal College of Surgeons in London.—8vo. pp. 224. London: Callow and Wilson, 1824.

DR. SAMUEL JOHNSON observed, that a very entertaining work might be written upon the fortune of physicians, and perhaps that remark might be equally applicable to the fortune of diseases also. Whoever has looked upon the medical world with an attentive eye for the last twenty or thirty years, cannot but have observed the influence of fashion and imitation in the practice of the healing art; and never was this more fully illustrated than in the downfall of mercury in syphilis, and its establishment as an universal and general remedy for the cure of a disease, of which our ancestors did not dream, but which every man and woman, and many children indeed, are now constantly suspected of labouring under. Mercury may now be said to be a companion of the toilette; it is commonly used as a domestic medicine, prescribed by every *Lady Bountiful* in the country; and salivation and tenderness of the gums (terms formerly held disgraceful, and only to be whispered among the dissipated and debauched,) are now familiar in the mouths of the most delicate of our fashionable belles. An affection of the liver has become the prevailing malady: without affixing any precise idea to the term, it is generally considered as a sufficient explanation of all the symptoms, not of absolute illness, perhaps, but of discomfort and uneasiness, of which a patient may complain; and, to set all matters right, mercury is invariably resorted to, and sometimes pursued to a frightful and unwarrantable extent. It is true, that lately several signs have appeared of the commencing decline of these fashionable doctrines, and we are happy in being able to announce the work before us as one which, in our opinion, is likely to contribute much towards reducing the diseases of the liver within their proper boundaries, and turning the attention of patients, as well as physicians, to the consideration of those derangements of the stomach and intestines, which too often simulate the symptoms of liver disease, and are consequently confounded with it; a mistake likely to be attended with serious consequences whenever it occurs.

DR. GRAHAM, in his Preface, commences by asserting the superior importance of the stomach and intestines, contrasting their exquisite sensibility with the dull and comparatively little-sensible liver; and boldly asserts that nine-tenths of those complaints called *liver and bilious complaints*, are in reality affections of the stomach and bowels. It is, however, not against the use, but the *abuse* of mercury, which our author exclaims: he feels persuaded (we use his own words) that calomel has been the

most fruitful of all sources of the astonishing frequency of stomach and (what are erroneously termed) liver complaints.

Our author, commencing his work with some pertinent remarks on fashion in medicine, proceeds to enumerate those symptoms usually ascribed to disordered liver: viz.—

"A sense of distention and oppression after eating, with flatulent, acid eructations; diarrhœa, or constipation, and uneasiness of the bowels; furred tongue; impaired appetite and strength; discoloured motions, they being either green, black, or much too light; nausea, head-ache, and bilious vomiting; palpitation of the heart; pain in the pit of the stomach and towards the right side; sallowness of complexion, and depression of the spirits:—and if the chief, or the whole, of these symptoms are present, especially if in a severe degree, it is usually considered sufficient to justify the opinion that a liver disease exists. But, according to my experience, a very large majority of those maladies are not liver complaints, but properly disorders of the stomach and intestinal canal; and this fact will form the subject of consideration in the first part of this Essay." (P. 5, 6.)

He readily admits that the liver is often secondarily affected; but then, so far from requiring mercurial treatment, it follows, as a clear consequence, that a plan of treatment adapted to the cure of the original affection will be most effectual.

We pass over several pages devoted to the consideration of the little natural sensibility of the liver, and illustrations of the great extent to which that viscus may be diseased, without either local pain being felt, or any sensible derangement of the health having been perceived; and these facts are contrasted with the acute sensibility of the intestinal tube, the strong sympathy subsisting between it and the remoter parts of the body, and the numerous and severe maladies which it simulates, and to which it gives rise.

The circumstances which have principally concurred to render hepatic disorders, and their remedy calomel, so common in England, are principally (says Dr. Graham) these—

"1st. A fulness and tenderness on pressure, and pain, being often present at the pit of the stomach, extending a little to the right side.

"2d. The alvine discharges being almost always discoloured in bowel complaints, and not unfrequently green or black, like pitch, from which they have been called *bilious;* and the power of small doses of mercury in correcting this appearance.

"3d. Organic disease being sometimes found in the liver after death, in cases of intestinal and other disorders, when no traces of such mischief are detected in any other viscus.

"4th. A great number of our countrymen annually return from the East and West Indies with biliary and intestinal disorders, arising from their residence within the tropics, where the liver is the organ the most obnoxious to disease, and where calomel is the sovereign remedy for all bodily ills: these, on their return to England, are ready to pronounce

the maladies of their friends to be liver complaints, and cannot, of course, conceive any other medicine equal to calomel.

"5th. The sensible influence which the opinions and practice of professional men from India have had, and still continue to have, over medical practice at home." (P. 22—24.)

In reply to the first of these reasons, our author remarks that the situation of the stomach, duodenum, and colon, may well account for the tenderness so often felt upon pressure, and so uniformly referred to the liver; and for proofs of which he refers to the reports of cases, and examinations of bodies after death, particularly of two cases as reported by Mr. Howship. The occurrence of these pains a fortnight or three weeks only after the patient is first conscious of indigestion, constitutes another argument for supposing that the liver is not the seat of disease, since such a derangement would take a longer time to develop itself.

With reference to the discoloured state of the alvine discharges, which has been announced as a proof of diseased liver, our author observes, that, under disease, that power of the stomach, which Dr. Fordyce called its *governing power*, is lost or impaired; that an acid is generated, by which the bile is decomposed, and green stools are the consequence; in others, viscid and black evacuations take place, from the union of this acid with the soda of the bile. The immense quantity of offensive matter occasionally discharged under severe disorder of the stomach and intestines, he thinks, tends much to confirm this opinion; since the secerning vessels of the liver bear no proportion to those of the intestinal tube. The same remark also applies to black and bloody evacuations. This portion of the subject is pursued by our author through many pages, and he brings skilfully to his aid the evidence of M. Andral, and the testimony of Mr. Abernethy himself; whose work, ill understood, has been the fruitful source of mischief in the treatment of these diseases. In the course of these remarks, we find Dr. Graham paying a handsome compliment to the venerable Dr. Jackson, whom, with much justice, he represents as having anticipated, in his work on Fever, published in 1798, the correct pathology of fever, and having first suggested that rational and successful mode of treatment, by blood-letting, purgatives, free ventilation, &c. which is now so universally adopted.

Our author brings strong proofs of the correctness of his opinions from the writings of Drs. Pemberton, Blackall, and the cases published in the Medical Repository, as well as from the pathological labours of Andral, Broussais, and others, who have not been able to detect disease of the liver in any thing like the proportion with the frequency of intestinal lesions.

What degree of credit to give to our author's fourth reason

for the fashionable doctrine of liver disease, we hardly can determine; but we should think that the influence of our valetudinarians from the Indies not quite so great as he imagines. Nevertheless, his observations on the different powers of medicine in different climates is perfectly accordant with our own experience; and we can safely say that, if the Italians are surprised at the doses of some medicines as given in England, our astonishment is not less at the vigorous manner in which they employ the tartar emetic, and some other potent remedies.

We are well inclined to believe that the practice of many men of talent, who have been accustomed to the acute hepatitis of India, and the consequent free use of mercury, has had a considerable influence in this country, and a very pernicious one: and the difference observable in the effects of large doses of that medicine in different quarters of the globe, is not among the least curious pathological facts; and the disregard of this plain truth has been the groundwork of much mal-practice, in this country especially.

How much appearances may deceive, and how necessary it is to be guarded in prognosis, the following case will show, and which we shall transcribe, although it has appeared, at no distant period, in the pages of our respected contemporary.

"Richard Sutton, ætatis twenty-five, servant in husbandry, was admitted into the Canterbury hospital, April 18th. This poor fellow was in a very debilitated state, and could not give any account of himself. From a person, however, who accompanied him, I learned that his symptoms were 'sickness, inability to retain any thing on the stomach, very obstinate constipation,' and that he had some time before laboured under fever and inflammation.—Habeat quam primum hydrarg. subm. gr. x. Extr. hyoscyami gr. v. Inj. enema purgans. Pil. hydrarg. gr. v. P. ipecac. comp. gr. x. horâ somni. On visiting him next morning, I had leisure to make a closer examination. Skin of a yellowish green hue, as were the conjunctivæ, (as described by Dr. Baillie, in green jaundice.) Great prostration of strength, and flatness of the abdomen. Pulse scarcely perceptible at the wrist. No fulness of either hypochondrium. On applying pretty severe pressure to the right lobe of the liver, he appeared to wince. Urine natural in quantity, but rather highly coloured. The calomel has procured several dark, offensive stools. Sickness only after eating.—Retained the Dover's powder, which, with the blue-pill, is to be continued every night. Cathartic mixture every morning, and the effervescing mixture occasionally.

"This plan was persevered in until the 25th, during which time I had several opportunities of showing this case to my professional friends, who agreed with me in thinking (though the case was obscure) that the *seat of the disease was the liver.*

"25th.—Omitt. Pulv. ipecac. co. Cont. Pil. hydrarg. Illin. semidrama Ung. hydrarg. Fort. sup. reg. Hypochon dextr. quâque nocte.

"The greatest attention was paid to the different symptoms. The

bowels became more regular in their action, and the dejections more natural; the sickness, too, was less distressing. Nourishing food, with wine, was given; as well as bark, aromatic confection, &c. &c. The treatment, however, was of no avail: he died on the 20th May.

"*Dissection.*—I examined the body twenty-four hours after death, when I found *the liver perfectly natural in size and structure; the gall-bladder about one-third full of healthy bile;* the stomach smaller, and more flabby than common; no disease of the cardia or pylorus; pancreas, spleen, kidneys, and urinary bladder, natural. The intestines had a contracted appearance, and their villous coat, as did that of the stomach, readily yielded to the application, though slight, of the finger-nail. The lungs were studded with tubercles in different stages, and very firmly attached to the pleura costalis on both sides, requiring very great force to separate the adhesions. The pericardium contained about an ounce of fluid, and was here and there spotted with coagulable lymph on the internal membrane. I thought the heart was smaller and softer than natural, but could not discover any disease in the mitral, semilunar, or tricuspid valves; neither was there any communication between the ventricles; the foramen ovale was closed. On removing the skull-cap, I was astonished to find the vessels, even the most minute, gorged with blood. The ventricles contained more fluid than usual, and there was evidently a softening of the centrical and medullary substances." (P. 123—127.)

After making some further observations upon other symptoms usually ascribed to affections of the liver, we come to our author's own more peculiar views of the subject. There are (he says) three different kinds of disorder of the digestive organs, each having its seat principally, if not exclusively, in a particular organ, and requiring a somewhat different treatment; though one species seldom occurs, and exists for any time, without in some degree occasioning the others. These three complaints are—those of which the stomach is the seat; those in which the intestinal canal is principally concerned; and, thirdly, those where a faulty or deficient biliary secretion is the principal or only complaint.

The first class of complaints is denoted by furred tongue, want of appetite, oppression at the pit of the stomach after meals, &c. The mouth is parched and dry in the morning; there is thirst, and the breath is offensive. The bowels sometimes are regular, often costive; there is tenderness on pressure at the pit of the stomach, and sometimes on the left side; morbid acidity in the stomach is also common; the urine is turbid, and deposits a yellowish, or yellowish-red, sediment. The complexion is pale, but rarely sallow. Such are the principal symptoms.

When the intestinal tube is the affected part, there is no fur on the tongue; the appetite is often more voracious than usual; there is no thirst, no fœtor of the breath, nor pain at the stomach:

but the bowels are irregular in their action, the stools are offensive, and diarrhœa is often present. When there is pain, it is felt on the right side; sometimes piles are troublesome; at others there is tenesmus. The countenance is often yellow, and the conjunctivæ also. In both these forms of disease, the pulse is unaffected in general.

In the third instance, where the biliary organs are chiefly affected, there is constipation; unhealthy evacuations, white or black; pain on the right side; a yellow, thick fur on the tongue, and high-coloured pink urine. The pulse is but little altered. Digestion in the stomach seems to be tolerably perfect; but indigestion begins below that organ. The yellowness of the eyes and countenance may be more permanent, but not more general than in the disorders above mentioned.

Of these three forms of disease, the second appears to our author to be the most common; those of the biliary function the least so.

We have now gone rapidly through the first part of Dr. Graham's publication, and come next to the consideration of the mode of treating these forms of disease, which it will be seen constitutes, in fact, the principal novelty and merit of the work; and here we are glad to perceive that, in regulating the exhibition of mercury, our author does not run into the common error of those who adopt peculiar views, of discarding entirely the medicine which has been over-rated or misapplied, but merely urges the exclusion of one particular form of it, under certain circumstances, and the more mild and sparing use of it in others. We shall not transcribe our author's accumulated proofs of the irritating qualities of calomel, when too frequently and too largely exhibited. We are prepared, indeed, to go further in the condemnation of this practice than the author himself. How often have we not known the quantity and colour of the evacuations produced by a large dose of calomel, insisted upon as the best reason for repeating it? But it is most certain that the extent and quality of the discharge is commonly the product of the medicine itself, and has no reference whatever to any condition of disease: nay, the oftener it is repeated, the stronger will be the apparent necessity for its repetition. But the real question is, in what particular affection is it necessary to prescribe mercury at all? Our author is of opinion, that minute doses of tartrite of antimony and rhubarb combined will, in very many instances, be equally efficacious in remedying the disease, and will have no detrimental effect upon the constitution; and nothing can be more true than Mr. Abernethy's axiom, now totally disregarded, "that, *if an unhealthy condition of the bile is induced by the stomach, no blue-pill will avail.*" Still our author candidly admits that sometimes calomel may be

eligibly administered; but he cautions us against an over-dose, and he brings a host of medical testimony in favour of this view of the subject, but whose opinions seem to have been wholly overlooked in the universal rage for mercury that has lately prevailed. We fancy that many of our readers will scarcely persuade themselves that neither Mr. Abernethy nor Dr. Farre are advocates for continued or large doses of mercury; and that men of great reputation have ascribed, and apparently with reason, many of the protracted diseases of children to the very remedy intended for their removal. Nay, it may be questioned whether struma itself may not be called into action frequently by such violent means.

This subject is pursued through many pages; but we now revert to those remedial agents which Dr. Graham substitutes for mercury. He considers that, in certain morbid affections of the stomach, the nitric acid is an invaluable remedy; and in others he recommends Brandish's caustic alkali, originally used in scrofulous complaints. The nitric acid he thinks chiefly beneficial in those cases where the stomach and duodenum are principally affected, and especially where mercury has previously been largely exhibited. It may be taken to the amount of six drops three times a-day, and gradually increased to eight or ten drops.

The caustic alkali of Brandish is also of most service in stomach disease; but, instead of being applicable where *heat* is a troublesome feeling, it is where coldness of the feet, languor, chilliness of the surface, and morbid acidity prevail, that its good effects are most sensible. It should be given in doses of a tea-spoonful morning and evening, and gradually increased to two tea-spoonsful. Its taste is best concealed by beer or milk, and it should be greatly diluted. Of course, the use of bitters and tonics is not precluded.

With regard to aperient medicines, our author, of course, condemns strong purging, and prescribes some slight aperient pills, composed of colocynth, rhubarb, and ipecacuanha, or some purgatives of the same class, to be used as required.

When the bowels are the chief seat of disease, tonics are of inferior utility; the great indication being to carry down the residue of the food, and to excite healthy secretions from the internal surface of the bowels, for which purpose several forms of saline aperients are given. At the same time, our author admits that, in this modification of disease, the blue-pill has been very useful; but it should be prescribed in small doses. The compound calomel pill he also declares to be an excellent alterative in these complaints. If considerable irritation and uneasiness exist in the bowels, and they are not relieved by the

above means, he advises the exhibition of the ol. terebinthinæ, according to the following formula:—

℞. Ol. Terebinthinæ ʒiv.
Vitell. Ovis q. s.
Sacchari albi ʒvj.
Ol. Menthæ gtt. iij.
Aquæ puræ, ℥v. M. cujus cochl. amplum bis vel ter in die sumatur.

The Cheltenham or Leamington waters may also be taken witn great effect in the second and third class of disease of the assimilative organs. But it is in the third form of disease, or that wherein the biliary organs are chiefly affected, that mercurial preparations are most useful; but here even it should be administered with caution, and salivation carefully avoided, and aperients, or rather purgatives, may be more freely given. An occasional emetic may be useful; and the vapour-bath is decidedly so.

We must draw this article speedily (we had almost said, unwillingly) to a conclusion; but our limits will not admit of our saying much more upon the subject.

Our author next adverts to the virtues of rhubarb, especially in the bowel complaints of children. He then gives some excellent dietetic rules. He advocates the use of the warm bath, or sponging the surface of the body daily with tepid water; and urges the necessity of attention to local pain, when occurring as a symptom of any form of these derangements.

In conclusion, we sincerely recommend the perusal of Dr. Graham's work to our professional brethren. We have long been convinced that such a work was imperatively called for: it will unquestionably draw the attention of the young practitioner to the consideration of the merits of a system, which has now become universal in extent, and formidable from the energy with which it is universally resorted to,—the system of pouring in mercury upon the slightest, and often indeed without the slightest, pretence whatever.

DIVISION II.

FOREIGN.

ART. IV.—*Du Froid, et de son Application dans les Maladies; Considerations Physiologiques et Therapeutiques, Observations, et Corollaires.* Par S. TANCHOU, Docteur en Medecine de la Faculté de Paris, Membre de la Legion d'Honneur, &c. &c.

On Cold, and its Application in Diseases; Physiological and Therapeutical Considerations, Cases, and Corollaries. By S. TANCHOU, Doctor of Medicine of the Faculty of Paris, Member of the Legion of Honour, &c. &c.—8vo. pp. 131. Paris: Crevot, 1824.

THE application of cold as a remedial agent is, we believe, better understood, and more frequently employed, in this country, than with our continental neighbours. Cold water has been lauded and recommended by many eminent men in this country, and has been employed, in fever especially, to an extent which the author before us seems not to be aware of. He, indeed, mentions the work of CURRIE; but evidently does not know how extensively the plan of affusion recommended by him has been acted upon in this country. Nevertheless, we are not disposed to quarrel with M. Tanchou for his sins of omission: he has produced a little work, the general tenor of which is praiseworthy; many of the remarks with which it is interspersed are fraught with good sense; and his treatise may be perused with pleasure and profit, even by the experienced practitioner.

A short introduction developes the plan of the work. Our author is not one of those old-fashioned prescribers who are fond of a farrago of remedies; he boldly advocates the use of the most simple means of cure, and justly observes that, *a priori*, he should have conceived that diseases from over-excitement were the most common, since nature has been so prodigal of the means of repressing them; and, among these means, he considers cold as being the first.

The plan of his treatise is the following: first, general considerations, containing some observations on life and the living principle; secondly, an account of the effects of the application of cold in various diseases, with illustrative cases; and, lastly, a set of twenty-four Corollaries, or short aphorisms, arising out of the observations and discussions in the former portions of the work.

We shall not detain our readers with any extracts from the general considerations of our author. He evinces an intimate acquaintance with the principal medical theories which have succeeded each other from age to age, and which have always taken their tint from the philosophy of the day. We may also pass by the consideration of what cold is, and proceed to inquire

into its effects when applied to the body in health: these are so well known, as not to need enumeration. The reaction consequent upon the application of cold, says our author, depends upon the degree of vital energy of the person: to the aged, to weakly persons, and children, cold baths are constantly hurtful; and therefore ROUSSEAU committed a great fault in recommending all children, without exception, to be plunged in cold water, and bathed in it daily. In disease, the two effects of cold may be advantageously employed; but every thing must depend upon the mode in which it is used.

Commencing with inflammation, our author observes, there are but three ways of combating that disease:—1st. By sanguineous depletion; 2dly, by suffering them to expend themselves *(de les laisser en quelque sorte s'user)* upon the part which is the seat of inflammation; or, 3dly, to displace it by revulsives. The first plan succeeds only completely when used at the commencement of maladies; the second is not without danger; but the third is applicable to all morbid alterations, only it must be graduated according to their intensity; and it is necessary to know those cases in which it would be prudent to attempt it.

All the means of cure that have been devised since the days of HIPPOCRATES to the present time have been, in fact, revulsives: such even now are the contra-stimulants of the Italians, *our little* blisters, our sinapisms, and even our insipid and nauseous tisans.

In nervous diseases, continues M. Tanchou, there is only one curative indication,—that is, to extinguish the exalted sensibility which is the cause, and forms the prominent character, of the disease; and cold stands foremost among the remedies for this purpose, acting, in the first place, by diminishing the general sensibility, and sometimes secondarily by forming, in consequence of the reaction, local congestion and inflammation. Such also, in this latter complaint, is the *modus operandi* of cold.

In slight maladies, especially where the nervous sensibility predominates, cold, by diminishing that sensibility, restores the balance of health. One example is given by our author, the case of Madame D., a highly nervous lady, who, without any marked symptom or real disease, suffered considerably from trifling causes. This lady had been accustomed to use baths heated to ninety-eight or one hundred degrees: her cure was effected by gradually reducing this temperature, until the patient was enabled to plunge herself into the coldest water, even in the winter; and it is remarkable, says M. Tanchou, that, although frequently suffering before this from colds, during the time that she employed the cold-bathing she escaped them entirely.

Several examples are given by our author of the good effects of the application of cold in some of the most formidable diseases

to which humanity is subject. In the plague at Moscow, in 1771, SAMOILOWITZ employed it with great success. CIRILLO, of Naples, used no other remedy in fever than cold water as a beverage; and, finally, CURRIE and GIANNINI recommend the affusion of cold water in the same diseases. PAULINI, SKRAGGER, &c. have been equally successful in the treatment of intermittents. In the typhous fever, so frequently epidemic in armies, the good effects of cold water have often been remarked. We can ourselves vouch for the truth of this remark, and are in possession of a host of evidence upon this part of our author's subject. He illustrates his remark by several apposite cases; and then proceeds to discuss the mode in which the remedy may be supposed to act. Here we find our author engaged in controverting the doctrines of M. BROUSSAIS; and we shall take leave to pass over this (to us) uninteresting discussion, and proceed to matters more practical; first premising that our author's theory of the effects of cold is, simply, that it always acts by depriving parts of their caloric. This privation, as far as concerns the nerves, merely lowers their sensibility; but upon the capillary vessels it has also the effect of constriction, and consequently restraining the circulation, and, by this double effect, opposing inflammation.

We have now arrived at that part of M. Tanchon's work which relates to the application of cold to particular diseases. In every case it is adviseable to abstract blood previously to the use of this remedy, especially if the inflammatory symptoms are violent. In inflammation of the brain or its meninges, its application is not unattended with danger, unless it is continued until the disease is totally overcome; since its previous removal would be attended by a most severe reaction. It is needless to remark, that most extensive sanguineous depletion should be practised in the first place.

A strong case is detailed by our author, illustrating the danger of removing the ice from the head of a phrenitic patient, who, though much relieved and rendered tranquil by its application, was still but imperfectly restored. In two hours after its removal, the symptoms returned with increased violence. It was impossible to bleed the patient; four men could scarcely retain him in bed; and, in less than three hours from the renewal of the attack, he expired.

At page 49, we have some very wholesome rules relative to the use of cold applications to children. Our author observes, that strong children only are benefited by cold, and these are less affected by cold and catarrhs than others. In the use of this remedy in the cerebral inflammation of infants, it must not be forgotten that the bones of the cranium are very thin, not completely formed, and that there is little or no hair. In the

case of convulsions in children, it is necessary to understand clearly the cause of the disease, before we have recourse to this remedy; since, in the case of colic or bowel complaint, its employment must be pernicious: and in no case should it be applied without premising an evacuation of blood. We extract the following case, as a specimen of our author's mode of management.

Miss Des——, aged five years, had been indisposed for five or six days. She was naturally of a florid complexion, very lively, forward of her age, and any resistance to her inclinations caused her to become convulsed. One day, after having been much irritated by contradiction, she was seized with pain in the head, the cheeks became alternately flushed and pale, and convulsive motions of the limbs were perceived. A medical pupil, who visited at the house, recommended warm bathing to the feet and injections; but nothing was done. The next day, all the symptoms were aggravated; fever came on, followed by delirium, and, in fact, all the symptoms of arachnitis. Leeches, sinapisms, and poultices, were employed, but without success; and, when M. Tanchou was called, he found the child lying on its back, the head a little thrown back; the eyes fixed, sensible to the light, and half shut; the pulse was quick, sharp, and contracted; convulsive movements of the limbs, face, and about the lips, were perceptible. It was proposed to renew the application of sinapisms and blisters; but our author wished previously to try the effect of ice: for this purpose, the patient was placed in a chair, the shoulders covered with napkins and cerecloth, to preserve the parts from moisture, and then the head was uncovered. He then began to pour upon it water of the temperature of the room; then he applied water just drawn from the well, and after, that into which some ice had been thrown. By degrees the patient's head, which hung upon the shoulders, resumed its proper position; the eyes opened; and, after about an hour of this application, the child knew and called her mother. The same application was continued for a few minutes; and afterwards the patient was placed in bed, and then the head was covered with ice: a person was placed on each side, to prevent the cap of ice from falling off, and to renew it from time to time, without removing it upon any pretext whatever. As soon as this was done, the blisters and sinapisms, previously recommended, were applied; and four days after the patient was convalescent. It ought to be observed, that the use of ice was continued for twelve hours; that cold applications were not entirely left off for two days, and that the temperature was during that time gradually increased.

In *gastritis*, our author, instead of employing tisans, orders the patient to hold a piece continually in the mouth; but this does not, of course, preclude the employment of other antiphlogistic means. In *nervous pains of the stomach*, also, we find cold insisted upon as the only remedy; but here we are cautioned against large draughts of liquid, lest vomiting should be provoked: and, as this part of our author's doctrine may appear as

questionable to our readers as it does to ourselves, we shall add an account of his method of using his favourite remedy in a case of this description, and which, we think, will prove how little cold had to do in the cure of this particular malady. It will also show that our worthy author is not more free from the suspicion of riding his hobby too hard, than others have been before him.

Madame H—, a very nervous lady, just recovering from rather a severe affection of the chest, was seized with spasm of the stomach and vomiting in the middle of the night. She had complained, in her walk the previous evening, of cold in the feet, but had dined well; in fact, had eaten more than usual. Our author found his patient labouring under extreme agitation, pallid, with perpetual vomiting and hiccough; the tongue moist and foul; the matters ejected were mixed with bile, but had no trace of food; the abdomen was soft, and free from pain; the pulse small, calm, and undisturbed; the respiration was affected; the hands and feet cold, and a shivering was occasionally felt. Our author administered antispasmodics, and opiate frictions upon the pit of the stomach, (ether had already been taken;) the feet were warmed, and iced drinks were ordered. The following day, the symptoms were a little alleviated, and the pulse quickened. In the evening, acetate of morphine was given, and the patient passed a tranquil night. The next day, however, at the same hour, the symptoms recurred; and M. Tanchou thought the best way of subduing the disease would be to provoke fever, as he terms it: in fact, to produce external irritation by the application of a large sinapism to the region of the stomach. At the end of two hours, a *smart fever* took place, and all the symptoms disappeared. After an interval of two days, their return was threatened; but an irritating anti-emetic brought back the feverishness, the nervous train of symptoms were overcome, and the patient got well.

We are at a loss to conceive how any man of understanding could for a moment imagine that this malady was in any way influenced by cold water. Ether, opium, antispasmodics, mustard poultices, had all been called into action; and yet our author brings forward this case as a proof of the efficacy of iced drink.

We pass by a few pages, in which our author details at great length his own case, which appears to us to have been merely a partial paralysis of the fingers from cold, superinduced probably by some gastric irritation, but which he prefaces by some remarks upon what he calls an unknown disease.

He next relates the case of a lady, who appears to have suffered, after her confinement, from severe dyspeptic symptoms, and who seems to have owed her cure to a very light and spare diet, but which was always taken cold; and, therefore, our zealous author has no scruple in ascribing all the happy results to the cold itself.

In *peritonitis* of every description, including, according to M. Tanchou, puerperal fever in all cases and under all circumstances, cold is the remedy *par excellence*. For our own parts, although inflammatory action appears to be the essence of puerperal fever, yet there is at times something more than mere inflammation connected with that formidable disease; and therefore we cannot quite agree with our author in this compendious method of deciding upon an universal mode of cure. It is fair, however, to observe, that our author freely advocates the use of the lancet or leeches, though he very properly prefers the former: but he goes on to say, "If by these means I cannot make myself master of the inflammation,—if the pulse remains small and frequent, the belly painful and tumid, respiration affected, &c.—I employ ice: this method has always succeeded with me, and I have *never lost any patients* labouring under this disease." (P. 72.) A fortunate case is given in illustration, and in which the ice was applied, with the same precaution as to gradually lowering the temperature as in the case before detailed.

In *affections of the chest*, our author never employs or recommends the application of cold; but he mentions several instances of persons who used no other method of cure in cases of cold or catarrh. It must, however, be admitted that, where there is a tendency to hemoptoe or phthisis, such a plan must be precarious,—we might say, indeed, pernicious.

In *gout* and *rheumatism of the joints*, our author does not appear to be apprehensive of the consequences of the employment of his favourite remedy. All he premises is bleeding the part with leeches.

In *aneurisms of the heart and great vessels*, M. Tanchou observes that he has seen, in an aneurism of the aorta, the bursting of the vessel suspended for many weeks by cold applications; and, in incipient aneurisms of small vessels, the employment of ice has reduced them entirely.

A page or two is next devoted to the use of ice in *inflammation of the testicle*, which we should not have alluded to, but for the purpose of remarking that our author, like a true Frenchman, attributes the use of cubebs in gonorrhœa to M. Delpech, and balsam of copaiba to M. Ribes. Indeed, throughout the whole book, he appears to be totally ignorant of every English work applicable to his subject; or, at least, he does not mention them.

The next disease mentioned by our author requires a little consideration. It relates to those pains occasionally experienced by females prior to the menstrual discharge, and for the cure of which our author recommends cold glysters to be administered, at the time when the pain is most violent; and he enters into a

long train of reasoning to prove the value of this remedy. For our parts, we shall be satisfied with the report of one or two cases in which it has been employed with success, premising that we have found camphor in substance almost a specific in this description of complaint. The case our author quotes was certainly highly successful, since the patient, who had been constantly troubled with these pains for three or four days prior to the menstrual period, was cured by one cold injection, and never suffered uneasiness afterwards. M. Tanchou adds, that he has subsequently used these means, and generally been equally fortunate. But we cannot but be struck with the concluding sentence of this page, and which we think it our duty to translate:—" I hesitated a long time to employ this agent: it appeared so opposite to those usually recommended by all authors and physicians, that it required mature reflection, and a desperate case only could decide me to adopt it. In spite of this, considering the danger that might ensue, I cannot even now venture to recommend it." (P. 96.) In this palinodia we beg heartily to join.

We have now arrived at the second part of M. Tanchou's work, which treats of the application of cold in external complaints attended with wounds. We shall make short work with this portion of our author's labours, since we find little novelty in his remarks, and are quite sure that, surgically, the use of cold water as a remedy is well understood and duly appreciated in this country. We must, however, protest against its general use in erysipelas, particularly of aged persons, or when situated on the head or face. It may be proper enough, as M. Pinel says, to do nothing in the way of external application; but, whatever theorists may say of metastasis, no practical man, we should conceive, would in such cases venture to apply cold water or ice.

One disease only remains to be mentioned, and that is *cancer*. We need scarcely say that nothing satisfactory is advanced by M. Tanchou upon this subject.

We shall conclude this article by transcribing a few of our author's corollaries: they are too numerous to give at full length; but the first eight are merely plain affirmations of the common effects of cold, and the usual phenomena of a shivering fit. The 9th Aphorism asserts that, in nervous diseases, cold, by taking away caloric, destroys the sensibility of parts; and that, in diseases of weakness, cold applied externally, at intervals, may be useful, by the successive reaction it produces; only it must be graduated to the vital power of the patient.

The 15th Corollary asserts that cold is salutary in asphyxia from carbonic vapours, but hurtful in those of submersion. The 16th recommends the *progressive* application of cold in acute

inflammations, and the same progressive decrease at the termination of the disease. The 22d recommends that, wherever there is plethora or fever, general or local blood-letting should precede this remedy; but that in nervous affections this is not necessary, and may even be hurtful. The last Aphorism is this:—"The use of cold should never be given up until you have become master of the disease; the intensity must be measured by that of the complaint; and the lowest temperature must be reserved for the most severe cases."

ART. IV.—*Competitio ad Aggregationem jussu Regis optimi et ex Mandato summi Regiæ universitatis Magistri, instituta anno* 1823. *An in Curandi Oculi Suffusione (vulgo Cataracte), Lentis Crystallinæ Extractio hujus Depressione Præstantior? Theses quas, Deo favente, in saluberrimâ Facultate medicâ Parisiensi, præsentibus competitionis judicibus, publicis competitorum disputationibus subjiciet et dilucidare conabitur die 26 Februarii, anni* 1824. Auctor J. CLOQUET.—4to. pp. 9. Parisiis, 1824.

A Comparison of the Operations for Cataract by Couching and by Extraction; being the Subject of a Thesis, to be defended and illustrated in a public Competition. By M. J. CLOQUET.

THE author does not enter into the question of what cases require operation; but gives a comparative view, resulting from his experience and observation, of the dangers of two of the operations for cataract, viz. couching and extraction. The operation of destroying the cataract by absorption is not, in the whole paper, alluded to. He divides the contents under three heads:—1st. Of the accidents common to both operations; 2d, of these cases in which one operation is preferable to the other; and 3d, of the comparative success of both operations.

I.

1. *Couching is more easily performed:* although the favourers of the operation by extraction say otherwise. In both, the time for deciding to operate is the same. Of the evils which are alike common to the two operations, he gives formally the following list, with remarks:

1st. *Pain.*—Depression of the cataract with the needle seems the more painful operation, from the suffering of the generality of patients.

2d. *Injury of the Iris.*—It is liable to be hurt in both ways of operating. If in extraction, it is while puncturing and cutting the cornea; while opening the capsule of the lens; while the lens is protruding through the pupil. If in couching, it may be punctured by the point of the needle.

3d. *Hæmorrhage* may occur in either case, from wounding the iris, or in piercing the choroid coat.

4th. *Vomiting* is of rare occurrence in either operation; but is most dangerous after extraction.

5th. *Inflammation* produces most bad effects after extraction, though the dangers after both are very great.

6th. *The growth of an opaque membrane in the eye* succeeds extraction the most frequently.

7th. *The closing of the pupil* is common to both.

2. *Concerning the dangers which are peculiar to Couching.*

1st. *A scar upon the sclerotic,* is not of great importance.

2d. *The danger of wounding the ciliary ligament and the ciliary nerves;* either of these accidents may be easily avoided.

3d. *The rising of the lens* after having been depressed, is seldom met with: a milky effusion within the capsule, or a secondary cataract of the capsule, may lead to that supposition.

4th. *Pain, irritation,* and *inflammation,* may affect the membranes, especially the retina, after this operation.

5th. He informs us that the *protrusion of the cataract,* during the operation, through the pupil *into the anterior chamber,* is a slight accident. It is bathed in the aqueous humour, and becomes absorbed.

6th. A considerable time is required to complete a cure after this operation.

3. *Concerning the dangers which are peculiar to Extraction.*

1st. *Too small, and too large, incisions of the cornea:* the former prevents the cataracts escaping; the latter endangers a loss of the humours, and gangrene.

2d. *A white cicatrix,* not always destructive of sight, may remain upon the cornea.

3d. *The pressure of the ball,* in squeezing out the lens, brings on inflammation.

4th. *A protrusion and a loss of some of the humours* may happen to the most expert surgeon; and blindness is then almost inevitable.

5th. *The falling forwards of the iris,* is a serious occurrence, and is productive of many dangerous evils.

6th. *Staphyloma* of the vitreous humour and hyaloid membrane occurs after extraction: the consequences are, sometimes, fistula of the cornea and wasting of the ball of the eye.

7th. *Admission of air* into the chambers: this, he says, is one source of irritation.

8th. *The lower eyelid being admitted into the incision,* is difficult to obviate, and is a source of irritation to the eye, and of loss of its humours.

9th. *The irritation of the tears* causes inflammation.

10th. After extraction has been attempted, *no other operation can be again tried:* this is not the case with couching.

II.

When one operation ought to be done in preference to the other.

1st. If the patient be very irritable—*couching* is best.

2d. If the ball of the eye project much, or if the contrary be the case —*couching.*

3d. If the pupil be very small, and does not yield to belladonna—*couching*.

4th. If there be leucoma, nebula, pterygion; or if the veins of the eye be varicose, and the lids prone to inflame—*couching* rather than extraction.

5th. If it be the floating cataract—*couching*.

6th. If it be the very soft, cheesy cataract—*couching*.

7th. If the capsule of the lens adheres to the iris—*couching*.

8th. If there be dropsy of the eye, neither ought to be done: if any—*couching*.

9th. If there be a small-sized cornea—*couching*.

10th. If the catatact have increased in size—*couching*: if it be small—*extraction*.

11th. If we are dubious as to the nature of the cataract—*couching*.

12th. If there be staphyloma of the sclerotic, neither should be done: if any, *extraction*.

III.

In comparing the success of the two operations, couching appears most favourable. In 246 operations, 166 were performed by couching: 45 were unsuccessful; 121 were nearly successful. Eighty had the cataract extracted: 38 were left blind; 42 nearly cured.

He concludes, that neither operation is exclusively to be preferred; but the easier and more generally successful one ought to be practised most frequently. He prefers, by the drift of his paper, the operation of couching; although in his Thesis, by the mistake of the printer, the word *extraction* is made use of instead of *depression*.

MEDICAL AND PHYSICAL INTELLIGENCE.

ANATOMY.

1. *Structure of the Gall-Bladder.*—M. Amusat lately exhibited to the Academy of Medicine several anatomical preparations of the biliary canals, demonstrating the true mechanism of the reflux of the bile from the ductus choledochus into the gall-bladder. M. Amusat has discovered, and shown, the existence of a spiral valve, a sort of Archimedes' vice reversed, which the neck of the gall-bladder is provided with.—(*Revue Medicale*, Juin.)

MORBID ANATOMY.

2. *State of the Blood in Janndice.*—M. Chevreul observes, that there are some peculiarities in the blood of new-born children who die of the disease called skin-bound (*induration*). If the skin of these subjects is incised, a yellow liquid escapes, composed of albumen, a colouring matter of an orange-red, and one of a green colour; and

these matters are also found in the bile of these infants. The blood of children with jaundice differs also much from that of healthy children, as far as regards the serum; its composition and colour being the same as above mentioned.—(*Journal de Pharmacie*, Juin.)

3. *Ossifications of the Arachnoid Membrane.*—MM. CULLERIER and MAINGAULT relate the case of a maniac, in whose brain several scrofulous cysts and abscesses were found, as well as many ossifications of the arachnoid membrane. The patient had complained during life of a very disagreeable smell.—(*Revue Medicale*, Juin.)

4. *Rupture of the Bladder.*—Dr. FIX, of Berne, reports the case of a young lady, aged twenty, of a lymphatic temperament, who had suffered, from the age of puberty, with various symptoms of debility: her face was remarkably pale; and, though she menstruated regularly, the discharge was scarcely coloured. After having languished in this way for some time, symptoms of intestinal inflammation supervened. Constipation and retention of urine were troublesome; the abdomen was tense, tender to the touch; the pulse small and contracted, and sixty in the minute. Glysters lessened the volume of the abdomen, but did not decrease the pain. The urine was passed frequently, in small quantities, and loaded with mucus; thirst great, and appetite quite gone. Death soon followed. On opening the body, a serous effusion, to the amount of ten or twelve pounds, was found; traces of inflammation also were perceived on the small intestines; but the bladder was the principal seat of disease: it was reduced to a thin membrane, resembling a mucous net-work, and was torn throughout nearly the whole of its extent.—(*Journal der Pract. Heilkunde.*)

PHYSIOLOGY.

5. *Effect of Castration in certain Animals.*—M. FANEAU DELACOUR, of Souzay, has performed a number of experiments upon sheep and pullets, with a view of determining the effect of castration upon the animal economy, conceiving that the loss of organs so important as the testicles, could not take place without materially affecting the health; which opinion was strengthened by considering the sudden evils often arising from more trifling causes,—such as the disappearance of eruptions, or the drying up of a long-established ulcer.

M. Delacour had eighty pullets castrated in his presence: eleven of these immediately exhibited well-marked signs of cerebral affection, and in three others the symptoms were observable, but not to so great a degree. Of eight which became mad, four of the worst, as well as two out of three which were threatened with apoplexy, were cupped upon the rump, and an actual cautery applied on each side of the cupping-glass; and in the four first instances, a cautery was also applied on the head. All these recovered: whereas, one left entirely to the efforts of nature died on the third day, the brain exhibiting the strongest marks of inflammation.

The same phenomena were observable among a flock of sheep, and in a greater proportion. The same remedies were made use of in seven of these animals, and they all recovered on the day the cauteries were made: whereas, two left entirely to nature died,—one on the fourth day, with all the marks of madness; the other on the second day, in a state of coma. The examination of the heads showed, in the first instance, a violent state of inflammation of the brain and its membranes: the brain of the second was softened, and the ventricles filled with a fluid resembling the white of an egg a little coloured.—(*Journal Universel des Sciences Medicales*, Juin.)

6. *Wound through the Chest, piercing the Diaphragm and Stomach.*—On the 7th of May, 1824, a man, about twenty years of age, on the evening of his wedding-day, plunged a very sharp cook's knife in the interval between the sixth and seventh rib, on the left side, and towards the sternum. He immediately fainted away. The medical men who were called in, judging from the situation and direction of the wounds, and the marks of blood upon the knife, that it had penetrated about two and a half inches; the symptoms announced an internal hemorrhage, which appeared to cease for a time: it, however, soon recurred, and the man died thirty-four hours after committing this desperate act. The body being opened, the following appearances presented themselves:—The wound had penetrated the cavity of the thorax for the space of an inch, but the lung was not wounded; yet there was a considerable effusion of blood on that side, arising from the wound of an intercostal artery. At the spot where the diaphragm was wounded, a sound was stopped in consequence of the protrusion of a portion of omentum. In the abdomen, the stomach was found pierced to the extent of three lines, at its anterior and superior part; and an effusion of blood had taken place into the colon, extending to the hypogastric region.

The conclusion which the reporter of this case (Dr. MILLET) draws from this examination, is that it tends to confirm the experiment of Dr. WILLIAMS, and goes to prove that the lungs do not, in their natural state, fill the interior of the pleura in the act of respiration; for, had that been the case in the instance above related, the lung could not have escaped without being wounded.—(*Journal Universel*, Juin.)

PATHOLOGY.

7. *Elongation of the inferior Extremities.*—MM. RICHERAND and CLOQUET relate the case of a patient of the hospital of St. Louis, whose lower limbs admit of being alternately lengthened and shortened to the extent of three or four inches. These gentlemen explain the circumstance by supposing that the heads of the ossa femora are destroyed, as well as the sides of the cotyloid cavity. The patient is fifty years of age; he walks with difficulty, but without pain. The limb upon which he stands becomes shortened, and the great trochanter touches the crusta ilii; the limb which he raises, on the contrary, be-

comes lengthened to its natural state, and alternately shortened upon making another step. The patient is afflicted with several exostoses of the bones of the pelvis, as well as many ossific tumors in the substance of the muscles.—(*Revue Medicale,* Juin.)

8. *Cure of external Hydrocephalus by Puncture.*—Dr. FENOGLIO relates the case of a child, eighteen months old, who fell from a balcony fifteen feet from the ground: the left parietal bone was depressed, but there was no fracture, and not a drop of blood escaped from the nostrils; the left humerus, and the bones of the fore-arm, were fractured. The parietal bone resumed its usual form in a few hours. On the day following the accident, violent fever came on: the breathing was stertorous, and the skin was burning hot; the lower extremities were cold, and there was a trembling motion of the right hand. Bleeding by leeches was resorted to, and ice applied to the head; and the fever was relieved. At the end of the fourth day, however, a fluctuating tumor was perceived at the posterior fontanelle, and which, being pressed upon, disappeared, but returned when the pressure was removed. In proportion as this tumor increased externally, the child became more lively; but, as Dr. Fenoglio justly saw the danger which threatened, in consultation with Dr. Giordano and Professor Rossi, it was determined to wait some time before any attempt was made to remove the swelling, considering it to be the product of extravasation only. After the seventh day, however, they changed their opinion as to its nature, and a small puncture was made at its most depending part, and a corrupted and fœtid lymph was evacuated. The infant immediately fell asleep, and slept for eight hours; but awoke at the end of that time with renewed fever, and the symptoms previously described. Leeches were applied to the left foot, an opening medicine administered, and a strong infusion of digitalis ordered. (*Neither the strength nor doses of this infusion are mentioned.*) In the evening, the fever was diminished. The opening into the tumor was not closed, and a fluid escaped from it drop by drop, but so slowly, that it was only known by the moisture of the pillow.

The intellectual and physical faculties of the child improved rapidly; the bowels acted freely; and this amendment went on from day to day, so that the parents conceived her free from danger. At the end of the second week, however, on a sudden, the tumor ceased to discharge; there was suppression both of fæcal evacuations as well as of the urine, and the former symptoms again recurred. Leeches were again applied to the ankles, castor-oil given so as to purge, and the digitalis again had recourse to, with so good effect, that in about eleven days the hydrocephalus had entirely disappeared.

Another severe attack was experienced after this, preceded by vomiting, and accompanied with convulsions of the whole body, but which were relieved by the same means; and the patient finally got well.—(*Journal Universel,* Mai.)

THERAPEUTICS.

9. *Belladonna a Preventive of Scarlet Fever.*—It has been long known that Dr. HAHNEMANN, of Leipsic, has asserted the above fact; but, since the year 1818, several practitioners in the north of Europe have repeated these experiments, and they find them founded in truth. The first of these, Dr. BRENDT, of Custrin, affirms that all who employed this remedy escaped the infection; and his account is corroborated by Dr. MUHSBECK, of Demmin, in Western Pomerania, who says he has used it for seven years, and with equal success; and he administered it to all those who dwelt in the houses where scarlet fever prevailed, continuing its use until desquamation of the cuticle had taken place in those attacked. Dr. DUSTERBOURG, of Warbourg, has also published an account of a series of experiments, confirming these statements; and several subsequent Memoirs have appeared, all equally corroborative of this virtue in the belladonna. The formula generally recommended is a solution of two grains of the extract in an ounce of some distilled water; and to children from one to ten years of age, from one to five drops of this solution is given four times in the day; from ten years of age and upwards, from six to ten drops is given, also four times in the twenty-four hours.—(*Revue Medicale*, Juin.)

10. *Nitrate of Silver in Chorea.*—M. PRIOU, of Nantes, has published two cases of chorea, cured by the nitrate of silver; which he, however, considers as a remedy quite new, and first employed by himself in these cases. The first case is that of a female, seven years and a half old, who had tried all the usual remedies in vain. The followig formula was prescribed:—℞. Argent. Nitrat. gr. vj. Ext. Opii ʒj. Moschi ℈ij. Camphoræ ℈iv. divided into ninety-six pills; and one was at first taken morning and night. In fifteen days, all the symptoms had disappeared. The disease afterwards returned; but the same remedies cured it again. Sixty-nine pills were taken during the treatment. The patient is now fifteen years and a half old, and remains well.

The second case is also a female, seven years of age, who was seized with chorea suddenly after a fright. After employing various medicines, the cold bath, &c. without success, or with only partial relief, the above-named pills were given, one morning and evening. After the fourth day, in consequence of the perceptible amendment, the parents of the child gave eight pills in the day, without informing M. Priou. They were afterwards continued for a month, at the rate of two, and then one, in the day; when the patient was cured, and has had no relapse.—(*Journal General de Medecine*, Juin.)

11. *Poisoning by Hydrocyanic Acid.*—Dr. HELLER, in a small pamphlet, lately published, on the above subject, objects to the use of certain excitants, such as the oil of turpentine and strong coffee; as, he says, they are always useless when the dose of this acid has been large enough to stop the animal functions; and that they are positively hurtful when the quantity has been so small as only to produce those

symptoms which terminate of themselves; and finally, that, in these cases of poisoning, the only stimulants necessary to be used are ammoniacal or etherial frictions, the open air, acidulated drink, motion, and exercise.—(*Journal de Pharmacie*, Juin.)

SURGERY.

12. *Operation of Lithotomy.*—M. DUPUYTREN has lately performed this operation in a new manner, and with a new instrument. The operation may be called the transverse operation, and the instrument a double *lithotome caché;* the instrument having, in fact, two blades, so disposed as to cut both left and right at the same time, on withdrawing it from the bladder. The sound is introduced, and the membranous portion of the urethra divided in the usual manner. The lithotome is then introduced into the bladder; it is opened, and, on withdrawing it, the prostate gland is divided so as to be cut in two halves, the one anterior, the other posterior. By this method, the vasa deferentia, the rectum, and the transverse artery of the perineum, as well as the pudica, are said to be avoided. M. Dupuytren has lately operated on a child, one year old, in this manner, and no accident has followed the operation.—(*Bulletin des Sciences Medicales*, Juin.)

CHEMISTRY.

13. *Detection of Hydrocyanic Acid in the Human Body.*—M. LASSAIGNE has published a long, but very interesting, paper on this subject, of which we can now do no more than give the conclusions deduced from his experiments and observations; which are these—

1st. That, by chemical means, it is possible to recognise, in a distilled aqueous liquor, the presence of hydrocyanic acid, in the proportion of one 20,000th part of the weight of the water.

2d. That, in animals poisoned by this acid, it is possible, at the end of eighteen and forty-eight hours, or even a longer period, to detect its presence.

3d. That it is in the viscera where this substance has been primarily taken, that it is to be discovered.

4th. That, in the brain, heart, and spinal marrow, it has not been possible to detect the most minute quantity, although the odour would induce the suspicion of its presence.

M. Lassaigne is aware that M. ITARD's experiments led him to the conclusion, that hydrocyanic acid might be spontaneously developed in the body; but, as the sense of smell alone has been appealed to as a proof of this fact, M. Lassaigne questions its being correct; especially as M. ROBIQUET has shown that the oil of the lauro-cerasus, which has a strong odour of bitter almonds, does not owe this to the small quantity of hydrocyanic acid it contains, but to a volatile oil. Added to which, M. Lassaigne has carefully examined the evacuations of the human subject; the matters contained in the intestines of various animals, especially of dogs, who have died of inflammatory diseases; as

well as animal substances in different degrees of putrefaction, and has never been able to detect the presence of this acid.—(*Revue Medicale*, Juin.)

14. *Analysis of the Male Fern Root.*—M. MORIN, of Rouen, informs us that this root, which is successfully employed as an anthelminthic, owes its virtue to a fatty substance, capable of being converted into a soap, of a nauseous smell resembling that of the root, of a very disagreeable taste, heavier than water. The root contains also gallic acid and acetic acid, some sugar, tannin, starch, and a gelatinous matter insoluble in alcohol or water, some woody matter, and the salts usually found in ashes. M. Morin believes this fatty substance to be formed of a fixed and a volatile oil; but he has not obtained yet sufficient proofs of this.—(*Annales de Chimie*, Juin.)

15. *Analysis of the Upas.*—MM. PELLETIER and CAVENTOU, in a Memoir read at the Royal Academy of Medicine, announce the presence of strychnine in the upas. In the upas anthiar, they have not discovered this substance, but a peculiar deleterious principle, soluble in alcohol and water, and which does not possess alkaline properties. It appears from the result of these gentlemen's observations, that the red colour produced by the action of nitric acid upon strychnine, does not depend upon a vegetable alkali; that the intensity of this colour is in an inverse ratio to the purity of the strychnine, being the effect of a foreign substance, with which the alkali is intimately united, both in the nux vomica and the St. Ignatius' bean.—(*Journal de Pharm.* Juin.)

MISCELLANEOUS.

16. *Question of Infanticide.*—We are requested to state, on the part of Dr. GORDON SMITH, that he is under the necessity of postponing his intention of lecturing, this season, on Political Medicine. His friends are aware how frequently he has, of late, been laid aside; and his health is in too precarious a state to warrant the contraction of so important an engagement with the public. He trusts that the delay which may intervene before he can execute a purpose he has so much at heart, will prove advantageous to the ultimate accomplishment of his wishes.

In the mean time, he is about to occupy himself, more fully than has yet been done by any individual, with the important, but ill-understood, subject of *proving or disproving the vitality of new-born children*,—or, to speak technically, of INFANTICIDE. There is no point in Forensic Medicine on which so much perplexity exists, and for the elucidation of which so little has in reality been done. He is persuaded that this is, in great measure, owing to want of due pains being fairly bestowed; for, whether the existing state of knowledge be estimated positively or negatively, no one, who has at all looked at the question, can be unaware that there is much work to be gone through ere satisfactory conclusions can be formed.

It is, perhaps, impossible for any individual—at least, Dr. S. feels that it is beyond the compass of his own power,—to do justice to the problem; as few who possess the means can be supposed to have the leisure requisite to collect, arrange, and apply the necessary data. But he relies on the zeal and liberality of the profession to aid him in so important an undertaking. He, therefore, solicits from those who may have opportunities of handling the bodies of new-born infants, a few items of information, which he hopes will not cause much trouble, and the aggregate of which he trusts he may be enabled to apply with precision and advantage, so that the truth may be established either the one way or the other; and to its due amount, with regard to certain doctrines that have been bandied about for many years, without any fair or satisfactory estimate as to their practical import.

Simple answers to the following queries form the object of the present application, premising that the subjects chosen must be perfect,—that is, of ordinary development; free from redundant parts, mutilation, disease, or putrefaction; and such as are unquestionably of the class to which they may be assigned. If in any particular instance there should be points in morbid anatomy, which, in certain cases, might greatly assist in coming to appropriate conclusions, they should be stated.

The subjects being classed—first, as STILL-BORN, or *such as have never respired;* and secondly, as VIVI-BORN, or those that have come into the world alive, but have died within twelve hours, the queries may be attended to in the following order:—

Class I.—*Subjects* STILL-BORN.

Required—

1. The sex.
2. Period of gestation when born.
3. How long *known* or *supposed* (as the case may be) to have been dead *in utero.*
4. The cause of death.
5. Nature of the labour.
6. Exterior aspect of the body.
   - *a.* As to colour.
   - *b.* —— integrity.
   - *c.* —— development.
   - *d.* —— formation.
   - *e.* —— marks of violence, ecchymoses, or any peculiarity.
7. Length from the vertex to the under-part of the heel.
8. Point at which the middle length of the body falls, to be given as regards its distance from the umbilicus.
9. Weight of the whole body, prior to any interference with its integrity,—to be accurately given in ounces and fractions, stating the species of weight used.
10. Aspect of the lungs *in situ,* on opening the thorax, and form of the diaphragm.
11. Weight of the lungs, separated from all attachments, avoiding the spilling of contents.

12. Weight of any fluid that may escape from the trachea, on holding the lungs over a vessel in the scale, in an inverted position, but *not squeezing* them; and the fluid described.

13. Result of placing the lungs in a washing-basin of water, first entire, then separately,—i. e. the right and left lung each by itself; noting if there be any difference of buoyancy in either, and which: as also, when cut in pieces, noting any morbid appearances in these organs.

14. Weight of the liver, &c. managed in the same way, with the exception of placing it in water.

15. State of the alimentary canal in regard to contents.

16. State of the urinary bladder.

17. State of the gall bladder.

18. State of the ductus arteriosus and venosus.

19. Colour and consistence of the blood; specifying the part or parts of the body in which the observation may have been made.

Class II.—*Subjects* VIVI-BORN.

Required—

1. The sex.
2. Period of gestation when born.
3. First actions—
   a. As to crying, or manifestation of the respiratory process.
   b. The state of the umbilical cord.
   c. Evacuations *per anum ac urethram.*
4. Cause, manner, and time of death.

Then assume the queries as in the other case.

It is neither expected nor desired that any individual shall take the trouble to furnish *a list.* One case, properly investigated and clearly stated, by an intelligent hand, will be worth hundreds of such as seem to have been collected abroad—one hardly knows how. In order, however, to impart necessary satisfaction as to the authenticity of the materials, it will be essential that those who may be pleased to transmit the result of their inquiries, should verify them with their signatures; and in all cases, where practicable, Dr. S. will scrupulously acknowledge his obligations.

Communications may be forwarded for Dr. Gordon Smith, to the care of Messrs. Underwood, 32, Fleet-street, London; and he leaves the economy of transmission entirely to the convenience and discretion of correspondents.

17. *New Work on the Nerves.*—The papers printed in the Transactions of the Royal Society during the last three years, detailing the Discoveries of the Functions of the Nerves, will be immediately republished, with Notes, and a general Introductory View of the Nervous System, by Mr. CHARLES BELL, Professor of Anatomy and Surgery to the Royal College of Surgeons, and Surgeon to the Middlesex Hospital.

18. MASCAGNI's *Anatomical Plates.*—Dr. GROTANELLI, Professor of Clinical Medicine at Sienna, in a discourse lately delivered before the Royal Institution of Sciences at Paris, observes, that the drawings of the celebrated Mascagni, from which the plates of his "Grand Anatomy" were taken, were finished in the year 1815, most of them as early as 1810; and that, among others who saw them in Italy in this state of preparation, Baron CUVIER may be particularly mentioned. He complains of the piracy committed upon this property by Professor ANTOMACHI, whose plates were identically the same with those of Mascagni; and the object of his discourse is to rectify this mistake, which had received some apparent sanction from an account of these plates published by the Institution in Paris.

New Association of Physicians.

To the Editors of the London Medical and Physical Journal.

Gentlemen,—On reading your excellent Journal for the last month, it was with feelings of regret I observed a proposed plan for establishing a Society, called the "Society of Physicians of the United Kingdom," having for its particular object the advancement of the science of medicine.

Admitting the science of medicine might receive some further advancement from the combined efforts of its professors than individual exertion would be capable of effecting, yet would not that advantage be equally well, or indeed better, effected by the union of the larger body of the medical profession, the *general practitioners*, with the professors, than by the formation of a Society consisting only of comparatively few individuals, many of whom, although Fellows or Licentiates of the Royal College of Physicians, are scarcely known as men of practical experience, and hence can but seldom have opportunities of communicating useful and improved practical intelligence to their brother professors?

I am more particularly led to make the foregoing remarks, observing the 4th Resolution of this Society, viz. "the exclusion of all those who practise either *surgery*, *pharmacy*, or *midwifery*." Now, Gentlemen, I much fear the consequence arising from the formation of such a Society: it will tend to place the general practitioner and physician at a greater distance from each other than they now are; consequently, materially affecting the professional recommendation of the latter; while the literary improvements of the former will be much injured by the absence of the eminent physician from the chairs of the Medical Societies, which have been established for years, and at which the general practitioner was accustomed, with pleasure, to meet his professional brethren, communicating personally any useful intelligence collected during his practice; and deriving the benefit arising from the opinions of those whom experience and long practice had raised to eminence; congratulating himself, at the same time, upon the handsome manner

in which the different members of the profession voluntarily met each other, striving to further one great object, "the advancement of medical science."

I recollect, and with extreme pleasure I mention it, the distinguished Professor of Surgery at the Borough hospitals, told his class that he was indebted to their grandfathers and fathers, in a great measure, for his advancement in his profession, for affording him opportunities, by their patronage, of displaying that skill which, for a number of years, he has continued to practise with such unrivalled success. But, Gentlemen, we do not find him endeavouring to form a Surgical Society, the members of which must be regularly-educated surgeons only, to the prejudice of the practitioner of pharmacy and midwifery.

Now let me ask, to whom are the most celebrated physicians of this metropolis indebted for their advancement to their present eminence? whether or not from the information derived from association with, and patronage of, the general practitioners? And let me also ask, who is the best physician? he who spends seven years at a university in classical acquirements (which is the only one that can be admitted as a member of the Society of Physicians of the United Kingdom), or he who, fagging up the hill of fame as a general practitioner, becoming daily conversant with disease, at length reaches the summit of his profession,—not by merely possessing a diploma, but by the superior exercise of his professional talents when called upon.

I must now conclude, by observing that I cannot think the fourth object which this Society has in view, viz. the advancement of the *interests* and *dignity* of its professors, will ever be attained; for, whatever tends to separate the different members of a profession must certainly form a considerable barrier to the improvement in that profession, as well as to the pecuniary interests and dignity of its professors.

I trust, Gentlemen, to your liberality in inserting this letter in your valuable Journal, and beg to subscribe myself, Gentlemen, your most obedient servant, &c.

A General Practitioner.

London; August 13th, 1824.

*** Had we even been enlisted among the members of the Association which our correspondent reprehends, we should not have laid claim to any great share of liberality in giving insertion to so temperate a protest.—Editors.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

**** It having been hinted to us that gentlemen, sending copies of their Works, prefer having their titles given at length, it is our intention, in future, to comply with this suggestion: but it is to be observed, that no books can be entered on this List except those sent to us for the purpose;—finding, in the lists hitherto transmitted, that the names of works have frequently been given as published, which have not appeared for weeks, or even months after.*

Medical and Surgical Cases; selected during a Practice of thirty-eight Years. By EDWARD SUTLIFFE, Queen-street, London.—Pp. 628. London, 1824.

Remarks on an Institution for the Preparation and Use of Artificial Mineral Waters, in Great Britain. By Dr. STRUVE, of Dresden, Member of the Societies of Mineralogy in Dresden, and of Natural History in Leipzig, &c. &c. To which are added, Testimonials, by Dr. KREYSIG, of Dresden, and Dr. CLARUS, of Leipzig.—Pp. 16. London, 1824.

System of Anatomical Plates, &c. &c. By JOHN LIZARS, F.R.S.E. Part V. Muscles and Joints of the Upper and Lower Extremities.—Edinburgh, 1824.

Principles of Medical Science and Practice. Part I. Physiology. By HARDWICKE SHUTE, M.D. Physician to the General Infirmary, and to the County and City Lunatic Asylum, Gloucester.—London, 1824.

Original Cases, with Dissections and Observations, illustrating the Use of the Stethoscope and Percussion in the Diagnosis of the Diseases of the Chest; also Commentaries on the same Subjects, selected and translated from AVENBRUGGER, CORVISART, LAENNEC, and others. By JOHN FORBES, M.D. Physician to the Chichester Dispensary.—London, 1824.

De Medulla Spinali nervisque ex ed proderentibus Annotationes Anatomico-physiologicæ. Auctore CAROLO FRANCISCO BELLENGERI, Regiæ Scientiarum Academiæ et Collegii Medici Taurinensis Membro; Imp. et Reg. Scientiarum, Litterarum, et Artium Academie, Patavinæ; Sodali Regiæ Domus Medico Augustæ, Taurinorum ex Typographia Regiæ.—1823.

Analyse des Travaux de l'Academie Royale des Sciences, pendant l'année 1823. Partie Physique. Par M. le Baron CUVIER, Secretaire perpetuel.

Histoire Medicale de la Fievre Jaune, observée en Espagne, et particulièrement en Catalogne, dans l'année 1821. Par BALLY, FRANCOIS, et PARISET.——A Paris, 1823.

Leçons sur les Epidemies, et l'Hygiene publique. Par F. EMP. FODERE, faites a la Faculté de Medecine de Strasburg. Tome IV.—A Paris, 1824.

Observations illustrative of the Nature and Treatment of the prevailing Disorders of the Stomach and Liver. By JOHN THOMAS GRAHAM, M.D. Member of the Royal College of Surgeons.—London, 1824.

Concise Narrative of an Ophthalmia which prevailed in a Detachment of his Majesty's 44th Regiment, on their Voyage to Calcutta, in the Summer of 1822. Together with an Account of other Tropical Diseases, and their Treatment, on Board the H. C. Ship Warren Hastings. By RICHARD JONES, Leamington, Fellow of the Royal College of Surgeons, and late Assistant Surgeon to the Warren Hastings, &c.—Warwick, 1824.

Du Froid, et de son Application dans les Maladies; Considerations Physiologiques et Therapeutiques; Observations, Corollaires. Par S. TANCHOU, Docteur en Medecine de la Faculté de Paris; Membre de la Legion d'Honneur, de la Societé Medicale d'Emulation, &c. &c.—Paris, 1824.

A Practical Treatise on Diseases of the Skin; comprehending an Account of such Facts as have been recorded on these Subjects, with original Observations. The whole arranged with a view to illustrate the Constitutional Causes of these Diseases, as well as their local Character. By SAMUEL PLUMBE, Member of the Royal College of Surgeons, of the Medico-Chirurgical Society, &c. &c.—London, 1824.

METEOROLOGICAL JOURNAL,

From July 20, to August 19, 1824.

By Messrs. WILLIAM HARRIS and Co. 50, Holborn, London.

	MOON.	Rain gauge	THERM. 9 A.M.	THERM. MAX.	THERM. MIN.	BAROM. 9 A.M.	BAROM. 10 P.M.	DE LUC'S HYG. 9 A.M.	DE LUC'S HYG. 10 P.M.	WIND. 9 A.M.	WIND. 10 P.M.	ATMOSPHERIC VARIATIONS. 9 A.M.	2 P.M.	10 P.M.
July														
20			65	75	62	30.30	30.26	55	57	NNE	N	Fine	Fine	Cloud.
21			65	76	63	30.22	30.20	60	65	NNE	SE			Fine
22			67	73	64	30.21	30.16	61	65	E	SE			
23			67	72	59	30.15	30.02	60	53	SW	SW			
24			67	74	60	29.86	29.80	60	55	W	W			
25			72	70	58	29.80	29.83	53	55	W	W			
26	●	5.	67	70	56	29.80	29.80	60	70	NE	NE		Cloud.	Rain
27			63	70	62	29.94	30.14	70	55	NNE	NE	Cloud.	Fair	Fair
28			65	70	60	30.23	30.20	53	58	SW	SW	Fine	Fine	Fine
29			67	70	56	30.07	29.87	59	65	ES E	E			
30			57	69	53	29.64	29.60	65	67	E	E	Fair	Fair	Fair
31			57	67	53	29.67	29.60	70	79	E	E	Fine	Cloud.	Rain
Aug.														
1	☽	.32	58	63	50	29.60	29.95	85	75	NE	N	Rain	Rain	Fine
2			57	69	53	30.03	30.00	70	77	NW	SW	Fine	Fine	
3			65	69	57	29.95	29.91	75	73	SSW	S	Cloud.		Cloud.
4			66	68	56	29.84	29.75	70	75	S	W	Fair		Rain
5			58	68	57	29.70	29.68	71	74	WSW	SW	Fine	Fine	Fine
6		.33	60	65	53	29.61	29.68	70	77	WSW	W	Cloud.	Rain	Rain
7			57	67	54	29.83	29.90	75	77	NNW	N	Overc.		
8			55	65	54	29.85	29.73	75	87	W	SW	Rain		
9	○		57	70	50	29.70	29.78	85	73	W	W	Fine	Fine	Fine
10			65	70	54	29.82	29.78	62	77	W	S			
11			65	72	59	29.65	29.73	70	70	W	WSW	Cloud.		
12			66	70	55	29.76	29.77	67	73	WSW	W	Fair		
13			69	68	53	29.83	29.84	70	72	W	N	Fine	Sho'ry	
14			64	68	55	29.96	29.95	68	70	W	S W		Fine	Fair
15		145	66	67	53	29.74	29.70	80	78	SW	W	Rain	Sho'ry	
16			63	67	53	29.70	29.80	70	70	W	W	Fine	Fine	Fair
17	☾		64	68	55	29.80	29.63	70	73	WSW	WSW		Fair	
18			65	67	51	29.64	29.57	70	70	SW	W		Rain	Cloud.
19		16	64	65	55	29.74	29.80	65	78	W	SW		Fair	Rain

The quantity of rain fallen in the month of July, was 1 inch and 35.100ths.

NOTICE TO CORRESPONDENTS.

Communications have been received from Dr. BALFOUR, Mr. WHITE, *&c. &c. to which we hope to give insertion in our ensuing Number.*

ERRATA *in our last Number.*

In Mr. SHAW's Paper, page 103, line 5 from the bottom, for *hair* read *haw.* Page 142, line 18, for *head* read *heart.*

THE LONDON

Medical and Physical Journal.

Nº 4 OF VOL. LII.] OCTOBER, 1824. [Nº 308.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,

SELECT OBSERVATIONS, &c.

ART. I.—*Report of Ocular Diseases, at the General Hospital, Fort Pitt, from 21st December, 1822, to 20th December, 1823.* By GEORGE R. MELIN, Assistant Surgeon to the Forces.

[Concluded from page 191.]

Amaurosis.—OF the nine cases admitted, there were none which deserve particular notice: they had all been long under treatment, and subjected to every plan that could be devised; so that, when they arrived here, their cases might be pronounced hopeless, as, in this complaint, I have seldom seen much relief afforded by any treatment, unless adopted in its commencement. Fortunately for the individuals who suffered in both eyes, the disease was only partial, and they enjoyed a useful degree of vision. Four of the cases were organic, and five functional; but, to this useful classification of Mr. Travers, the army practitioner has sometimes a third to consider,—namely, the feigned; and one which it is nearly as impossible to detect as to cure. The real disease is liable to degenerate into it; for the soldier who contracts a complaint which disqualifies him from further service, if he should be anxious to obtain his discharge, will be unwilling to acknowledge any amendment: and I know of no disease in which he can act thus, with so much impunity as in this complaint.

Iritis.—Only five cases of this complaint were admitted: three were discharged to their regiments, and two invalided. When the latter came into hospital, in one case the eye was disorganized, and in the other the retina was wholly insensible to light, and never afterwards recovered. In these cases, as well as in some that occurred after operation, I immediately commenced the use of mercury, and gave two grains of calomel, with a quarter of a grain of opium, every two hours, until the mouth became affected; on which a visible and marked improvement took place in the disease: the aqueous humour became

clear, the absorption of effused lymph commenced, and the pupil recovered its round form.

Indeed, I know of no complaint in which the action of medicine is so clearly and beautifully seen as in this. I shall not enter into the question of the various species of iritis, whether idiopathic, syphilitic, or mercurial; but, in whatever form it appears, or whatever cause produces it, I must express my unqualified confidence in the power of mercury (when properly and judiciously administered,) to arrest its progress, and effect its cure. In general, I consider that, the more rapidly the system is placed under its influence, the better; and I have always commenced with two grains of calomel and a quarter of a grain of opium, in a pill, every two hours. But a case has lately occurred here, in a poor patient who applied for my advice, which will lead me to increase the quantity when next I meet with the complaint. The eye was painful, the sclerotic coat very vascular, the pupil irregular, the aqueous humour turbid, and a small quantity of lymph effused into the anterior chamber. I directed him to take the pills as above; and the next day he called on me, when, to my surprise, the eye was nearly perfectly recovered, and his mouth very sore. On inquiring I found that, by mistake, he had taken two pills every two hours. I ordered him to discontinue the pills, and directed a wash for the mouth; and on the following day there was no sign of the disease.

An interesting case of iritis occurred in an officer of the 40th, which Dr. Jones, Dr. Skey, and myself, considered to arise from a gouty habit. Mercury was quickly exhibited, and produced its usual beneficial influence on the iris; but an increased action in the sclerotic vessels, attended with pain and an increased flow of tears, taking place towards evening, and subsiding about five or six o'clock in the morning, regularly for a few days, led us to consider the complaint as having assumed an intermittent type. Bark was accordingly administered, and a pill of opium directed to be taken on the first appearance of the nocturnal paroxysm, and warm fomentations directed for the eye. Under this treatment, with strict attention to the state of the stomach and bowels, the nightly exacerbations were immediately relieved, and soon subsided. In about a month from the period of the first attack, the eye was perfectly restored to a healthy state.

Another case, which I think deserves to be noticed under this head, is one which occurred in one of the cases of cataract, but which I do not consider to have been caused by the operation, as the eye had perfectly recovered, and the inflammation did not appear until twenty-two days after it was performed.

The patient was of a delicate habit, and had not been long

discharged from the medical division for a rheumatic attack, to which he was very subject. The inflammation of the iris came on during the evening, and, on visiting the hospital the following day, a small quantity of lymph was already effused into the anterior chamber. Calomel and opium were immediately directed, and in eight days the lymph was absorbed, and the eye recovered. A fortnight after, a similar attack took place, and by similar means in twelve days the eye was again recovered. Ten days after, the inflammation and deposition of lymph again occurred, and by the same means in nine days it was again overcome. Nine days after, the inflammation recurred, and in four days the report states the eye to have been recovered. Seven days afterwards, the same symptoms took place; but, as the effusion of lymph was but trifling, and all pain had subsided, and as the system was under the influence of mercury, it was not again given, and during the week the lymph became absorbed, and the iris resumed its natural appearance. On the seventh day after, a similar paroxysm of pain, attended by a flow of scalding tears, took place during the night, terminating before morning in an effusion of lymph in the bottom of the anterior chamber. The pain having entirely subsided, and the eye feeling perfectly easy, I determined to watch its progress, and to give only a small quantity of blue-pill at night, so as to keep up a slight mercurial action. In four days, the lymph was absorbed, and the iris became apparently healthy. On the seventh day, the attack again returned, with similar effects to the former ones. Considering it now, from the regularity of the periods and the great similarity of each attack, to be a species of intermittent, I ordered bark; and, on the day of the expected attack, the doses to be increased. On the seventh day, it returned; but the pain was less severe, and it did not occur at so early an hour as it generally did. During the week, the effused lymph became absorbed; but again, on the seventh day, the attack recurred. For three weeks it thus regularly returned, and the effusion of lymph became absorbed each week: but, finding that bark had no decided influence over it, I discontinued it, and directed six drops of liquor arsenicalis to be taken three times a-day, and on the day of the paroxysm to be increased to ten drops. This had the desired effect. The next attack was very mild: its duration was much diminished; and, in place of occurring in the beginning of the night, as formerly, it did not commence till morning. The following attack was still milder, and from that period he had no further return of them; and shortly afterwards he was discharged, in better general health than when admitted, and the eye quite recovered. He remained for some weeks at the depôt, before passing Chelsea Board, and the eye continued perfectly strong.

I have detailed this case thus fully, as it is the only one of the kind I ever met with; nor do I recollect to have ever read or heard of a similar one.

Ulcers of Corneæ.—These generally existed in the cases of chronic ophthalmia, and usually healed under the same treatment as adopted for that complaint. In some few cases it was necessary to touch them with a stronger solution of nitras argenti, and occasionally with the caustic itself; and in all cases of ulcers of the cornea I directed the eye to be covered with a bandage, so as to prevent the lids from disturbing the process of cicatrization by their motion. When ulcers of a spreading nature existed, I paid particular attention to the general state of health of the patient, as in most cases I found they depended on it. These species more frequently occurred in weak and delicate constitutions, or where the system had been much reduced by bleeding, purging, &c. In such cases, much benefit was derived, after clearing the primæ viæ, by bark and mineral acids, and gently touching the edges of the ulcers with a piece of caustic scraped to a fine point. When the ulcers were very irritable, I directed the eye to be held, every two or three hours, over the vapour of boiling water; to which was added some tincture of opium and camphor mixture, and which generally afforded much relief. By these means I succeeded in arresting the ulceration, and in not a single case did it extend through the cornea.

In the cases of rupture of the cornea and protrusion of iris admitted, if the protrusion was not large, I touched it, every second or third day, gently, with a pencil of caustic; but, if considerable, it was necessary to puncture the iris with a lancet, to allow the aqueous humour to escape, so as to reduce the tumor of the iris, before applying the caustic. This is generally sufficient to produce adhesion between the iris and cornea, and sometimes leaves very little deformity of pupil.

Cataract.—On the operations of the eye it will not be necessary to enlarge much: there was nothing very peculiar in the cases requiring them, nor in the mode of their performance; and it is the less requisite since the publication of the comprehensive and practical work on the subject by Mr. Guthrie, a work which comprises every thing that should be known by an operator, and which should be studied with attention by every surgeon who wishes to become a successful one.

A few of the operations for cataract and artificial pupil were performed by Mr. Schetky, with that adroitness and ability for which he is so distinguished, in every branch of his profession.

Of the eleven cases operated on, four were by extraction, and seven by cutting up the lens (for absorption) through the posterior chamber: the latter were cases in which both capsule

and lens were opaque, and in which the operation by extraction was not admissible. In three of the unsuccessful cases, the operation itself was perfectly successful, but the retina proved to be insensible, which was strongly suspected in each case previous to the performance of the operation; but it was thought right to give the individual a chance for the recovery of vision.

In one of the cases it had the desired effect, in a very singular manner. The patient had amaurosis of the left eye and cataract, with suspected amaurosis of the right. The lens was extracted, without any benefit to the vision of the right eye; but, as soon as the eye was allowed to be exposed to the light, the retina of the left began gradually to recover its sensibility; and, when discharged from hospital, he enjoyed a very useful and comfortable degree of vision. The fourth unsuccessful case was one in which the vitreous humour was disorganized, and escaped as soon as the lens was extracted.

Cataract and Contracted Pupil.—In these three cases of contracted pupil and capsular cataract, the operation performed was that of making a central aperture in the iris, by a small knife passed through the sclerotic coat into the anterior chamber, and then cutting backwards through the iris, and breaking up the capsula and lens for absorption. Two of them succeeded remarkably well; but the third was followed by severe and repeated attacks of inflammation, which terminated in closure of the pupil, and thickening of the iris from effusion of lymph. The subject was an unfavourable one for operation; his constitution was worn out from tropical disease, and long service in the East Indies.

Artificial Pupil.—These operations were principally required in consequence of loss of vision, from cicatrix of the cornea opposite the pupil, or from rupture of the cornea and adhesion of theiris, with contracted pupil. Thirteen of them were performed by cutting out a portion of the iris, opposite a transparent part of the cornea; and one by the same operation as that described for cataract with artificial pupil.

In the operation by excision of the iris, care should be taken to unite the artificial with the natural pupil; for, if any of the circular fibres are left undivided, they will prevent the radiated ones from contracting, and the artificial pupil will be too small. This accident happened in one of my cases; and I was obliged to divide this band of fibres by a second operation, before a useful degree of vision was obtained.

None of the operations failed; but a few of them, as well as some for cataract, were followed by high inflammation, which was successfully subdued by general and local bleeding in the first instance, and then, if the iris appeared engaged, by calomel and opium every two hours, until the mouth became slightly

affected. In the use of mercury in inflammation of the iris, succeeding operations, I place great reliance, and I am only surprised that it is not more generally adopted: I have found it of the greatest advantage, and am certain that I have saved many eyes by it, where bleeding alone would have failed.

Entropion.—Three of these operations were for inversions of he superior lids, and one was for that of the inferior. The one performed for the former was that described by Mr. Crampton, with the exception that the transverse incision on the inside the lid, uniting the two perpendicular ones, was carried through the tarsus, in place of barely dividing the conjunctiva. The case of entropion of the inferior lid was but slight, and only required the simple operation of removing an oval piece of the common integuments, and uniting the lips of the wound by sutures, to restore the lid to its natural position.

Ectropion.—These two cases appearing to me to possess some interest, both from their nature and the length of time they had existed, without any attempt being made to relieve them, I shall give in full, as they do not admit of being abridged. They clearly show that ectropion, dependent on cicatrization, can be cured by operation; and that we should attempt it in all such cases, whether caused by burns, scalds, ulceration, or wounds.

John Smith, 22d Foot, æt. 33; admitted 22d February, 1822, labouring under complete eversion of the lower lid of the left eye, occasioned by an extensive wound he received fourteen years ago, by the wheel of a cart passing over the side of his head, and fracturing the frontal bone and the external margin of the orbit. The edge of the everted tarsus adheres to the malar bone by a firm cicatrix, and the muscles of the cheek exercise great power in drawing it downwards, whenever the lower jaw moves. He has been in this state fourteen years, and suffers much inconvenience from it.

23d.—The operation for ectropion performed, by making a free horizontal incision beneath the whole ciliary margin of the lid, and thus detaching it from its firm adhesion to the malar bone; after which, a triangular piece was cut out of the centre of the tarsus, and the lips of the wound brought together by two sutures. The lid was then retained in its natural position by adhesive straps and a bandage.

25th.—The dressings removed this morning: the granulations of the horizontal wound healthy. Has experienced no pain since the operation.

27th.—The wound of the tarsus perfectly healed; the sutures removed. Granulations spring up rather too abundantly from the horizontal incision beneath the orbit, and were therefore touched with the sulphate of copper.

March 6th.—The wound nearly healed.

10th.—Discharged: the lid perfectly restored to its natural position.

Joseph Geoffry, Royal African Corps, æt. forty-seven; admitted 27th March, 1822, labouring under ectropion of the left inferior lid, occasioned by a sabre wound received ten years ago, which divided the

orbital ridge of the superior maxillary and malar bones, and partially the nasal ones. The ciliary margin of the lid is held down by a firm cicatrix to the lower margin of the orbit, especially towards its inner angle, and he suffers a great deal of inconvenience from the dust and wind, as well as from the tears flowing over the lid. Conjunctiva not thickened.

The operation for ectropion was performed on the 9th of April, by detaching the everted margin of the lid from its adhesions, cutting out a triangular portion of the tarsus near its centre, and then bringing the divided edges together by means of two sutures. Great difficulty was encountered in dividing the adhesions, from their very firm nature, and the depth at which they existed within the margin of the orbit, and also from their being situated very near to the lachrymal sac, which required the dissection to be performed with great care, to avoid wounding it. This was, however, effected. The wound was then filled with lint, supported by adhesive straps, and the whole covered with simple dressing and a bandage.

12th.—The wound of the tarsus united, and the transverse one granulating freely. Has had no pain since the operation. The sutures were removed, and the wound filled with lint, and supported by straps.

16th.—The wound filling rapidly with healthy granulations, and the lid now retains its natural position.

20th.—The wound very nearly healed.

27th.—Discharged: the wound healed, and the eyelid perfectly retained in its natural situation.

Having now concluded the report of the practice pursued in the treatment of ophthalmic complaints at this hospital, I have the satisfaction to add, in support of its efficacy, that, out of 568 cases of the disease treated, there was not an eye lost, nor one impaired, that was not irrecoverably so before admission into hospital; and that, in thirty-seven cases of operation, only one can be fairly said to have failed. In conducting many of these cases to this fortunate termination, I had the aid of several intelligent officers, who were attached to me, and from whom I derived much assistance. Some of them are now stationed in countries where ophthalmia exists in its severest forms, and I hope shortly to hear from them a favourable account of their success in its treatment, especially in the acute stage, by the solution of caustic and moderate depletion.

In taking the preceding review of the ocular diseases and operations that have occurred at this establishment for the last two years, I have endeavoured to render it as brief as possible, and aimed more at compressing the matter, than in giving an elaborate and finished detail; as I know too well the important occupations of those who will have to peruse it, to trespass longer on their valuable time than is absolutely necessary. If, in attempting to accomplish this desirable end, I may appear in some parts obscure, I trust it will be viewed with indulgence;

and, should any explanation be required on any of the points of practice, I shall be most happy to afford it.

Yearly Report of Ocular Diseases, from 21st December, 1822, to 20th December, 1823.

Numerical Abstract of principal Diseases.		*Of these, Re-admissions.*	*Number of Men treated.*
Remained, 20th December, 1822	46	0	46
Since admitted	138	18	120
Total treated	184	18	166
Discharged: To join regiments	71	2	69
Discharged: Unfit from eye diseases	65	15	50
Discharged: Unfit from other causes	24	1	23
Total	160	18	142
Remaining	24	0	24

Return of Operations performed, together with their Results.

Artificial Pupil	Successful	6
Do. with Cataract	Successful	1
	Unsuccessful	1
Cataract	Successful	4
	Unsuccessful	2
Tumor of Lids	Successful	1
Staphyloma	Successful	1
	Total	16

The two unsuccessful cases of cataract succeeded perfectly as to the operation, but no benefit ensued, the eyes being amaurotic; which was strongly apprehended to be the case, previous to operating.

ART. II.—*Extract from a Report of Diseases prevalent in the Garrison of St. Vincent, in 1824, containing an Account of an Abdominal Abscess, in which Pus was voided through the Urethra.* By J. ELLICK, Esq. Surgeon to the Forces.

I CANNOT, in justice to the science of surgery, conclude this Report, without mentioning a singular case of abdominal abscess, which lately occurred in one of my own children, a boy between seven and eight years of age. About the middle of November last, he was observed to be a little lame of his right leg, but he did not complain of any pain or uneasiness: in the course of some days it increased, and, on examination, I found

some hardness and tenderness on making pressure just above Poupart's ligament, on the outer side of the great vessels going to the thigh. As I found he had been of late running about in the wet, and sitting occasionally on the damp grass before the house, I became fearful there was some incipient affection of the hip-joint; and therefore enjoined rest, and applied leeches to the groin. He gradually got worse; lost his appetite, became drowsy, feverish, and emaciated, with profuse sweating at night. By the middle of December, he could not lift his foot from the ground without supporting the ham with his hand, and was obliged, when at rest, to bend his thigh forward at a right angle with the body; the tenderness in the groin was increased on pressure, but no appearance of a collection of matter could be ascertained. The thigh could be rotated with ease, and could bear pressure upwards; which was in favour of the hip-joint not being affected. He still got worse daily; became almost reduced to a skeleton; and I was much alarmed for his safety. He continued drowsy, and slept much, occasionally moaning and starting in his sleep at night, but did not complain of pain, unless the limb was moved or the groin pressed upon. I never observed that he had any rigors.

On the 28th of December, while resting on the sofa in an adjoining room, he suddenly called to me, and said he had a strong inclination to make water. I held the utensil, and, to my surprise, he voided between two and three ounces of pure pus from the urethra, which was followed by the urine: he expressed that he voided it with ease, and, in his own words, "comfortably;" saying that, for some time previous, he had always felt pain in making water. He had a good night; felt better in every way.

By the following morning, he passed about the same quantity of pus with his urine, which I measured after its deposit. He ate a hearty breakfast, and continued in better spirits through the day. He seemed to improve, though but slowly, for some days; and the pus in the urine gradually decreased in quantity.

On the 5th, 6th, and 7th of January, the urine was clear, and did not contain any purulent matter. On the 8th, there was some tumefaction and hardness of the abdomen, felt along the direction of an horizontal line, drawn from the ilium to midway between the umbilicus and pubis, and from thence a little downwards towards the pubis; and which gave reason to suppose (particularly as, near the extremity of the line next to the ilium, the part was somewhat softer to the feel,) that an abscess was pointing in that direction. He then had little or no fever, but still was much emaciated. In the course of another week, the tumor was completely developed, and, from the elasticity of its feel, evidently contained pus, and showed a disposition to open

at a short distance from the extremity of the line before mentioned, near to the ilium, above Poupart's ligament. Of late, his health, spirits, and appetite, had evidently improved; but the emaciation of body continued.

On the nights of the 17th and 18th, he became very restless, sweated much, seemed greatly oppressed, and complained of much pain in the ham and calf of the leg of the affected side; and consequently, being myself apprehensive that there might not be sufficient energy in his constitution, which was apparently sinking, to cause a natural evacuation of the contents of the abscess, and that it was about to take some other internal route, I was determined, early in the morning of the 19th, to make an external opening, and evacuate the matter; which I accordingly did, with a common lancet, making an opening about the size of that generally done in bleeding from a large orifice, with the view of allowing the matter to discharge itself gradually, and not expose the cavity. About four ounces of pure healthy pus was immediately evacuated, and a good deal more oozed from the opening afterwards. A small poultice was applied over the part only where the abscess had pointed.

The abscess continued to discharge freely; and although not much amendment in his general health was observed during the first week after it was opened, yet subsequently he recovered rapidly, and almost unexpectedly. In the course of fifteen days, the external wound healed, leaving some hardness along the line from the ilium to midway between the umbilicus and pubis.

The discharge during the second week became serous, and the urine was a little turbid,—more, apparently, from albuminous than purulent matter. The thigh gradually returned to its natural straight position, and its movements became performed with freedom. His health, appetite, and spirits, rapidly improved; he gained flesh; and at this period (March 20th) is perfectly recovered, and looks better than he has ever done since his arrival in the West Indies, more than three years ago.

In regard to the cause of the formation of this abscess, which perhaps by some would have been denominated *psoas*, I have some reason to think it was owing to accident. He acknowledged that, just before he first had any degree of lameness, he received a kick from another boy on the lower part of the abdomen, and also that he had been suddenly tripped up by another. His constitution is naturally a good one, though somewhat impaired by a West-India climate; he has never had any symptom of a scrofulous nature, nor has any thing of the kind ever been known to exist in any of the family. For some time before his illness, he was somewhat out of health: he looked

thin, and his belly was a little tumid; which was attributed to his running about in the wet, and occasionally exposing himself to the heat of the sun. From whatever cause it originated, whether accidental or constitutional, I consider the case, with its fortunate termination, to be one of rare occurrence; and therefore think it worthy of occupying a place in the Report.

He was seen occasionally, during the progress of the disease, by Mr. Blake, surgeon of the 5th regiment, and Mr. Mac Gibbon, hospital-assistant. The former gentleman, who stands high in professional acquirements, was persuaded in his own mind that it was a regular psoas abscess; and evinced apprehension of a fatal result speedily following the opening of the abscess, from the extreme degree of emaciation to which my little patient was reduced.

St. Vincent; March 20th, 1824.

Art. III.—*Cases of Neuralgia.* Communicated by Benjamin Hutchinson, Esq.

To the Editors of the London Medical and Physical Journal.

Gentlemen,—I have extracted from my case-book the following examples of Neuralgia, which may be acceptable to the numerous readers of your Journal.

I remain, Sir, your obedient servant,

BENJ. HUTCHINSON,
Fellow of the Royal College of Surgeons.

Miss Rebecca Holmes, of Normanton, near Southwell, a young lady, of a pale, leuco-phlegmatic complexion, between twenty and thirty years of age, and of a delicate constitution. My patient has been severely suffering, during the last three years, with intermitting pains in the right side of her face. She states that this painful affection began in the upper jaw, and extended in a very short time over the whole of the right side of the face to the temple. Several paroxysms occurred in the course of each day, and her rest at night was generally interrupted by the agony and beating of her temples. She was suffering most acutely when she first presented herself to my notice. She was, at all times since her first attack, unable to bear the least air to blow upon the parts affected; her bowels were constipated, her pulse feeble, and her tongue deeply furred. The pain extended also very frequently to the upper and lower lip, the left ala nasi, and to the superior bicuspid teeth.

The case assumed the true character and every accurately-marked symptom of a severe tic douloureux. Having but little dependence on any other mode of attacking this disease, I immediately began my assault with the same weapons which I had, on many former occasions, found eminently successful. A brisk cathartic or two of calomel and

jalap preceded the use of the ferri subcarbonas; and in the course of six weeks her painful enemy was wholly subdued.

Neuralgia Sciatica.—Thomas Pearson, of Gonalston, in the county of Nottingham, fifty-six years of age, and of a robust constitution, the subject of the following very severe case of Neuralgia Sciatica, began, in the month of October, 1822, to complain of most acute pains in his loins and right hip, frequently extending to the groin, pubis, and the whole of the thigh. He states that his complaints had, during many months prior to this severe attack, been holding out menaces of a very unpleasant nature; his knees, ankles, and almost the whole circle of his joints, giving him, in some degree, a fore-warning of what he was subsequently to expect. In October, he was deprived of the power of following his occupation as a day-labourer, by the excessive increase of pain in these parts. He describes his miseries by comparing them, in the first instance, to a creeping sensation in his right hip, extending down to the knee and leg, and occasionally shooting towards the pubis and groin. This sleepy, benumbing feeling was almost immediately converted into pain of the most acute and lancinating kind, especially when attempting to move the affected parts. These torments were not accompanied by any considerable constitutional fever. He was placed, by his master, under the care of two eminent physicians in Nottingham; who ineffectually endeavoured to give the poor sufferer relief by the usual means of bleeding, blistering, the bark, opiates, colchicum, guaiacum, &c. &c. After many months of acute suffering, I was consulted by the poor man's master on this very distressing case, and immediately commenced my treatment with an active mercurial purgative; after the due operation of which, he began with large doses of the subcarbonate of iron three times a-day,—viz. one drachm to each dose. At bed-time, he took a couple of pills containing a proportion of the narcotic vegetable extracts; and the emetic-tartar ointment was used twice a-day to the parts affected, by which a very copious crop of pustules was very speedily elicited. In the course of a very few days, a manifest change for the better had taken place; his pains were much mitigated, and he was soon enabled to leave his bed. He is now perfectly well, and has long resumed his employments as a day-labourer.

"*To B. Hutchinson, Esq.*

"*Nottingham; March 26th,* 1824.

"My dear Sir,—Assisted by Mrs. Lacey's memory, I am enabled to send you some few particulars of my tormenting case of tic doulenreux. The first attack of this complaint occurred in the autumn of 1820, which I then imagined to proceed from some disease of my teeth, accompanied with the rheumatism in my face; and it continued to harrass me most violently during the whole of the winter and spring. I felt very little inconvenience from it during the summer; but, as the autumn advanced, the paroxysms became stronger, and continued to increase during the ensuing winter. In the spring of 1822, this painful affection of my face increased with such rapidity and violence, as to confine me to my room for the space of five or six weeks; at the commencement of which, my friends, with myself, deemed it necessary to call in my medi-

cal attendants, who immediately advised the application of leeches to my gums, as well as bleeding in the arm, with fomentations, liniments, internal medicines in great variety; and, lastly, the extraction of a tooth, which produced a very considerable increase of pain and inflammation in the face, so much so as to prevent me taking any thing but liquids for nearly a week. Not the most remote sensible benefit was derived from these means; but, as the temperature of the air became milder, the pain gradually abated, though not to so comfortable an extent as in the year preceding. At about the usual time it returned, but not with the same degree of severity as in the spring; when a friend advised me to try the tincture of gum guaiacum, aloes, and turpentine, to be taken in milk, which at first appeared to afford me some relief; but, after continuing it a very short time, it lost the desired effect, and this dreadful malady continued to increase, so much so as to unfit me for business nearly the whole of the winter and spring 1823; which so depressed my spirits, that I became divested of all hopes of ever being delivered from so lamentable a situation, when a friend accidentally calling upon me, and describing my case to him, he felt assured that my disease was the tic douloureux, and strongly urged my consulting you. I immediately adopted his advice, and the most happy results you are well aware of; and believe me it is my greatest desire to offer you every grateful acknowledgment in my power. My sensations and my present state of health are, indeed, such as I had never presumed to look forward to.

"Believe me, my dear Sir, to remain, your obliged and faithful servant,

"WILLIAM LACEY."

The case above related by my patient, a respectable grocer in Nottingham, was in every point a most deplorable one. His constitution, strength, spirits, and energies, were greatly impaired. The nerves more immediately affected were some twigs of the palatine branch of the superior maxillary going to the nose, the infra orbitar, the inferior maxillary, and the respiratory nerve of the face. I commenced my attack on this formidable and apparently invincible enemy, by two or three brisk doses of calomel, followed by a saline cathartic on the succeeding mornings. The subcarbonate of iron was then entered upon, in doses of one drachm three times a-day; and an anodyne, consisting of a small portion of the vegetable narcotics, was given in the evening. An amendment was happily experienced in a few days, and followed by the result which my patient has so pleasingly and gratefully expressed in his letter.

B. H.

ART. IV.—*Illustrations of the Efficacy of Compression and Percussion in the Cure of Rheumatism and Sprains, Scrofulous Affections of the Joints and Spine, chronic Pains arising from a Scrofulous Taint in the Constitution, Lameness, and Loss of Power in the Hands from Gout, Paralytic Debility of the Extremities, General Derangement of the Nervous System; and in promoting Digestion, with all the Secretions and Excretions.* By WILLIAM BALFOUR, M.D. of the University of Edinburgh.

[Concluded from page 208.]

As the following case was treated by JOHN FOTHERGILL, Esq. surgeon, Darlington, though strictly by my advice and directions, I think it proper to give it in that gentleman's own words:—

CASE XXXVIII.— No. I.

"*From John Fothergill, Esq. to Dr. Balfour.*

"Respected Friend,—In consequence of the favourable impression received from the perusal of thy work on Rheumatism and Gout, by my patient, Thomas Backhouse, of West Lodge, he desires me to transmit to thee the following account of his case; and would be glad to be informed if thou thinkest the principles and remedies detailed in that work would be at all serviceable in his case. A reply as early as convenient will be esteemed a favour.

(Signed) JOHN FOTHERGILL."

"*Darlington, third Month (March) 13th,* 1822."

"Thomas Backhouse, now seventy-one years of age, of the sanguineo-nervous temperament, spare habit, and middle stature. From the earliest period of his life has, in general, enjoyed tolerable health; but, for the last thirty-five years, has at times been much troubled with flatulence, accompanied with distressing giddiness; occasionally, a sense of cold and violent shivering; severe spasmodic pains about the chest, shoulders, and back, apparently proceeding from flatus, as eructation generally afforded relief; extreme dimness of sight, which frequently continued for half an hour or more at a time, and sometimes, though not often, was succeeded by violent pain in the head and sickness. He has also suffered from many other affections, generally termed nervous. He has, through the course of his life, been regular and temperate in his manner of living. He has constantly been in the habit of using a good deal of exercise on foot, which he has always thought himself better for. He has not for some years been able to ride on horseback, on account of the giddiness.

"On the 20th, ninth month (September), 1821, he awoke out of a sound sleep with most distressing vertigo, which was much increased by opening his eyes, or on the slightest motion of his head. The bowels have been regulated, throughout the disease, by mercurial alteratives and mild aperients. The alvine discharges have generally exhibited a tolerably healthy appearance, although the secretion of bile has sometimes been vitiated; and, during a severe attack of giddiness, a melænous

discharge from the bowels took place, about two months ago, and continued three days; since which it has not recurred.

"The secretions from the kidneys have varied considerably throughout the course of this illness; sometimes being perfectly healthy in appearance, at others loaded with uric acid: and this is uniformly the case when the giddiness is the most troublesome. He often experiences great uneasiness in the bowels, accompanied with flatus; and, during his most severe attacks, it generally escapes by eructation. It is necessary to observe, that, whenever he experiences pain in the abdomen, the extremities are relieved; both parts not being affected at the same time.

"He has now been entirely confined to bed these twenty-five weeks, almost all the time on his back, not being able to move without increasing the giddiness, which is his chief complaint. His appetite has been almost uniformly good throughout this attack. He occasionally complains of pain and stiffness in the muscles of the neck. When the abdomen has been uneasy, he had used friction with advantage."

To the above communication I replied, that, however complicated his complaints, yet that there was a strong gouty diathesis in Mr. Backhouse's case, was very apparent. This view of it, however, did not militate against the adoption of percussion, but rather called for it. Indeed, had I been in search of a case calculated to exhibit the power of this remedy in a striking point of view, I could not have stumbled on or selected a better. Therefore, and as both Mr. Fothergill and his patient seemed fully to comprehend the principles on which percussion proves so powerfully remedial, I gave it as my opinion that it was applicable in Mr. Backhouse's case, with a fair prospect of advantage. Accordingly, I directed it to be applied, under the regulation of the patient's feelings, to the extremities and spine. I also recommended the use of emetic tartar at the same time, as auxiliary to percussion in equalizing the circulation of the blood and distribution of the nervous power. I likewise suggested an issue in the nape of the neck, on account of the overwhelming vertigo.

I conceived my directions were sufficiently explicit; but the case being one of exquisite delicacy, and Mr. Fothergill a stranger (as he candidly acknowledges) to the practice of applying percussion, he hesitated to commence it "without some more particular instructions." Accordingly, I soon received the following communication on the subject.

No. II.

From John Fothergill, Esq. to Dr. Balfour.

"Respected Friend,—I was not favoured with thy obliging reply of the 15th instant, to my letter of the 13th, until this morning, which arose from thy letter having been mis-sent to London. I was afraid, in consequence of the haste in which I was obliged to write my last, that, in the enumeration of symptoms, I might not have given all the requisite

information; but, from the conclusions which thou hast drawn, I am persuaded that no material circumstance has been omitted. Thy reference to Case 30* gave me pleasure, as the remarkable effects of percussion on the digestive organs of Lord M. had been pointed out by me to my patient, and led, in a considerable degree, to thy being consulted. My patient feels quite disposed to adopt the mode of treatment which thou hast been so kind to recommend, so far as it is practicable; but it is necessary again to mention, that T. B. always lies on his back, and the giddiness is so urgent on any attempt to alter his position, that at present percussion could not be performed along the spine; and though an issue in the neck would probably have a beneficial effect upon the head, and has frequently been proposed, yet, such would be the difficulty of dressing it, that I scarcely think it can be considered practicable. Even the operation of shaving is frequently attended with much distress. *He has now been six months entirely confined to his bed, and nearly to one posture.* Since I had the pleasure of writing to thee, my patient has considered himself much worse than for some time before.† The lightness in his head, and sensations of disturbance within the abdomen, have been more troublesome. The urine secreted under these symptoms is pale as water, and on cooling deposits a white sediment, although that passed but a few minutes before had been of a clear amber colour, and devoid of sediment; or, at other times, loaded with uric acid. He desires me to inquire, whether percussion of the extremities, the abdominal parietes, and parts to which we can have access, would have such a tendency to relieve some of the most urgent symptoms, by restoring the balance of circulation and nervous influence, as to enable him to change his posture so as to allow of percussion along the course of the spine?

"From continued friction over the surface of the abdomen, Thomas Backhouse has frequently experienced much relief, and the expulsion of great quantities of gas from the stomach and bowels; yet I have no doubt percussion is calculated to prove a much more efficacious stimulus, particularly where there is congestion in deep-seated vessels. At the same time, I am convinced that much will depend on the manner in which it is employed; and I am afraid, *without some more particular instructions*, we should not be able to give the fullest effect to a remedy, of which I have formed considerable expectations.

"With respect to the use of antimonial wine, I would ask whether my patient ought to continue, at the same time, a practice which for years he has considered beneficial to him,—viz. he has taken a little rhubarb and magnesia every day? Would it be better to suspend its use when he is taking tartarised antimony? As he perspires a good deal in health, it is very probable that antimonials are required now, as there has not for some time been much sensible perspiration, although the skin feels soft and healthy. The alterative pills which he has taken have generally contained some preparation of antimony.

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* See my *Treatise on Rheumatism, &c.* 1816 and 1819.

† I beg the reader to bear in mind that the operation of percussion had not been put in practice at this period.

"When he has the worst attack of giddiness, he cannot bear his eyes open, as the light greatly increases the vertiginous symptoms; but, when he is better, there is no intolerentia lucis: he is able to read a great deal.

"My patient has given a long trial (in addition to the alteratives and aperients mentioned in my last,) to various preparations of colchicum, particularly the acetum colchici, with magnesia and sulphate of magnesia; and also the extract of colchicum, prepared by evaporating the acetum colchici.

(Signed) "JOHN FOTHERGILL."

"*Darlington; third Month (March) 21st*, 1822."

From this second letter of Mr. Fothergill, it appears that Mr. Backhouse was getting worse instead of better; and that he was altogether in a state of such extreme delicacy, that both practitioner and patient were afraid to begin percussion, though they anticipated considerable advantage from it. Imagining myself, therefore, at the bed-side of the patient, I stated that I would begin with percussion at the most distant parts of the extremities, the soles of the feet, in the most gentle manner, but would increase the force as I found the patient could bear it; that I would travel over the extremities and such parts of the pelvis as I could reach (the patient lay on his back), in the same slow and cautious manner; and attempt the spine as soon as circumstances would permit. I assured Mr. Fothergill that, if his patient could bear the weight of a feather falling on him, he need not be afraid to apply percussion, because, though an efficient, it was a perfectly harmless remedy; and that I had no doubt he would find his patient able to bear its application with more freedom, at every succeeding operation. The result of these directions and assurances will appear from the following communication:—

No. III.

From John Fothergill, Esq. to Dr. Balfour.

"Respected Friend,—I was duly favoured with thy letter of the 23d ultimo, respecting our friend Thomas Backhouse; and, according to the directions, percussion has been applied twice a-day to the superior and inferior extremities, and to such parts of the spine as can be reached. Friction having been used over the abdomen previous to our correspondence with thee, and apparently with advantage, it has been continued. These applications have been exceedingly grateful to our worthy patient, producing an agreeable sensation, and a more healthy feeling and appearance of the surface.

"His general health is undoubtedly improved in a very considerable degree.

"He has been able, for the last week, to remove from his bed to a couch, where he has remained several hours every afternoon.

"But the vertiginous symptoms occasionally recurring, accompanied

with much uneasiness within the abdomen, he remains still a great sufferer from these symptoms.

"My patient has tried repeated small doses of the antimonial wine; but he thought it did not agree with him, and could not be prevailed upon to continue its use.

"Notwithstanding the ample and clear directions with which thou wast so kind as to furnish us for the application of percussion, I cannot for a moment suppose that it has been practised in such a manner as to give the fullest effect to so valuable a remedy; arising partly from our not being adepts in the art, and partly from the circumstances of the case.

"I believe my patient is fully sensible of the great benefit which he has certainly derived from percussion, and I have no doubt he will continue it; but he sometimes fears that it will be inadequate to the removal of the most distressing symptom, vertigo. This, I think, may arise from the imperfect manner in which it is applied, and occasions regret that the distance is so great from Edinburgh, as I should be exceedingly glad if my patient could have the advantage of seeing thee on the spot; but of this I have at present no expectation. This report, however, I think, will be considered, upon the whole, favourable and encouraging. His bowels are regular, with a little assistance from medicine; and the alvine evacuations have a healthy appearance, as also that from the kidneys. The latter, however, is subject to considerable variations, being sometimes pale, particularly when the bowels are uneasy, or the vertigo worse than usual; at others it deposits a white, and occasionally is loaded with pink or lateritious, sediment. If thou wouldst wish any further information on the case, I shall be happy to answer any inquiries, and to hear from thee when convenient.*

(Signed) "JOHN FOTHERGILL."

"*Darlington; fourth Month (April) 25th*, 1822."

Conceiving I had Mr. Backhouse's case fully before me, I was in no hurry to answer Mr. Fothergill's third communication; the more especially, that it was principally a report of the success of the remedy employed. In a few days, however, I received the following from him:—

No. IV.

From John Fothergill, Esq. to Dr. Balfour.

"Respected Friend,—I was in hopes of receiving a reply before this to my last letter respecting our patient, Thomas Backhouse; but, not

* I cannot omit this opportunity of saying, that, in a considerable number of cases of rheumatism, sprains, and in several complaints where there has been a disturbed balance of circulation and excitement, I have employed percussion with decided benefit; and particularly in a case of severe spasmodic affection of the hands, fore-arms, and muscles of the right side of the face, with coldness of the extremities, and the pulsation of the radial artery scarcely perceptible; the stomach at the same time so irritable, as to reject food of whatever kind. Being at a few miles distance from my house, I directed percussion to the superior and inferior extremities, and gently along the course of the spine. The spasm soon relaxed, flatus ascended from the stomach, and was succeeded by violent pain in the fore-arm for some time. By proper remedies, the stomach and bowels were soon restored to their usual state.

hearing for some time, I supposed thou mightst be out of town. He desires me to say, that he continues the use of percussion, and his general health improves; but the giddiness is not less troublesome than before.*

"I think I mentioned in my second letter, that T. Backhouse wished, if agreeable to thee, to remunerate thee at the close of our correspondence. In this way he has been in the habit of consulting Dr. Trotter, of Newcastle, and Dr. Scudamore, of London. With the latter he has been in correspondence upwards of four months.†

(Signed) "JOHN FOTHERGILL."

"*Darlington; fifth Month (May) 4th,* 1822."

No. V.

John Fothergill, Esq. to Dr. Balfour.

"Respected Friend,—I was duly favoured with thy letter of the 7th instant; and am now requested by my patient, Thomas Backhouse, to state that he has been able to leave his bed and his couch, and to sit in the upright position in his arm-chair the whole of the afternoon, for about a week; but certainly with very little diminution of the vertiginous symptoms, the attacks of which are always accompanied with uneasiness within the abdomen. The alvine excretions are regular, and not unhealthy in appearance. The secretion from the kidneys, more especially since T. B. left his bed, has been surcharged with sediment, both red and white. No local evacuation has been practised, nor has the antimonial wine been resumed. It was objected to by my patient, even with the effervescing mixture, from an opinion that medicines in a liquid form have generally been found to disorder his stomach. Percussion has been sedulously employed to all the parts thou didst mention as proper for the application of that remedy,—the soles of the feet, outsides of the inferior extremities, sacrum, ossa innominata, and spine. A few days ago, a slight blackish, or livid, appearance was observed about the middle of the tibia of each leg: a spirituous lotion was applied, and percussion on those parts avoided. The appearance is subsiding.

"The immediate object of my writing now is to say, that, in consequence of the muscles of the lower extremities having been so long inactive, T. B. is unable to stand without some assistance. He has tried a flannel roller, applied in such a manner as to give moderate and equable support from the foot along the leg, and continued above the knee,

* Mr. Backhouse cannot mean that "the giddiness is not less troublesome" than it was previous to the employment of percussion, because then he was confined to his bed, chiefly to one posture, and had been so for six months; whereas he is stated, in Mr. Fothergill's first report, Letter III. of date 25th April, "to have been able, for the last week, to remove from his bed to a couch, where he remained several hours every afternoon. It follows, therefore, that nothing more is meant, than that "the giddiness was not less troublesome" on the 4th of May than it was on the 25th of April; a circumstance no way incompatible with gradual and general amendment.

† This is another luminous instance of the truth of what I have advanced in my preliminary observations to this series of Cases, that compression and percussion cure many cases of rheumatism, and complaints allied to it, over which, medicine, directed by the most eminent skill, has no power.

which he finds enables him to stand with a great degree of firmness. He would be glad to know if thou thinkest that degree of compression calculated to be useful, and whether any other mode of applying it would be preferable, or likely to afford more assistance. Please to mention the best times for applying the rollers, shouldest thou approve of them; and how often they should be applied, &c.

(Signed) "JOHN FOTHERGILL."

"*Darlington Post-mark, 23d May, 1822.*"

In answer to this fifth communication, I expressed my unqualified approbation of the bandages to which Mr. Fothergill had had recourse, in order to give support and vigour to his patient's limbs. Compression, indeed, by bandages exclusively, was what I had set out with in my "New Mode of treating Rheumatism and Sprains;" and Mr. Fothergill must have seen many instances of the happy effects of the practice in my "Treatise on Rheumatism," referred to in his first letter. It was the difficulty, or rather impossibility, of applying compression by bandages to many parts which are frequently the seats of rheumatism, that suggested to me the necessity and propriety of making compression with the hands. This method, though not so permanent, might, by repetition, I thought, produce all the effects of permanent compression by bandages. The result justified my anticipations. Again, finding many cases in which the parts affected were so deeply seated as to be unapproachable by compression in any form, I was totally at a loss how to proceed. Reflecting, however, on the effects produced on a sprained limb by the dashing, or falling from a height, of cold water upon it, I concluded that the benefit derived was not from the temperature of the water, but from the concussion produced in the deep-seated and gorged vessels. It occurred to me, therefore, that this process could not only be imitated, but surpassed, by percussion, which might be applied gently or forcibly, so as to affect deep-seated or superficial parts, as circumstances required.

Such were the steps, such the ratiocination, by which I arrived at a method of treating rheumatism and complaints allied to it, which has restored many hundreds to health and strength, who would otherwise have been a burden to themselves and their friends for life; and among these is Thomas Backhouse, Esq. of West Lodge, Darlington, as will appear from the following and last report on his case.

I directed the bandages to be applied with a degree of firmness short of impeding circulation, and only when the patient was out of bed.

No. VI.

From John Fothergill, Esq. to Dr. Balfour.

"Respected Friend,—Our patient, T. Backhouse, requests me to hand thee the inclosed ——— ; and to inform thee that he is consider-

ably better in his general health. He is now able to walk a considerable distance every day, and to ride in his carriage without experiencing giddiness.

"He left home last Friday, in order to spend a few weeks at Seaton.* He has still considerable tenderness of some joints; but, on the whole, it must be considered that his convalescence has been as rapid as could be expected: and I think there is no doubt but percussion has not only tended to relieve the local affections, but to restore the general health. He has continued the use of it up to the present time.

"I remain, very respectfully, thy assured friend,

(Signed) "JOHN FOTHERGILL."

"*Darlington; seventh Month (July) 29th,* 1822."

Summary.—Case of a gentleman, aged seventy-one, who had, for the last thirty-five years, been occasionally troubled with distressing giddiness; extreme dimness of sight, succeeded sometimes by violent pain in the head, and sickness; flatulency; a sense of cold and violent shivering; spasms in his breast, back, and shoulders; pain in the bowels and inferior extremities, alternately. In September, 1821, the vertigo suddenly increased to a most distressing degree, and was greatly exasperated by light, or the slightest motion. Henceforth the patient was confined to his bed, chiefly to his back. He had been in this state for six months previous to consulting the author, and was getting worse daily. Cured in about three months, so as to be able to undertake a journey of twenty miles!

Art. V.—*On the After-Pains of Parturition.* By Dr. Kinglake.

The after-pains of parturition are chiefly induced by uterine contraction, designed to close and secure from further bleeding the vascular openings produced after the expulsion of the fœtus, by the detachment and exclusion of the placenta. Were these pains or contractions not to occur, destructive hemorrhage would most probably ensue; it is therefore of the utmost importance that this, as well as all other ordonnances of nature in the animal economy, should obtain in the most uninterrupted and effectual manner. When these pains are efficient for the purpose destined to be answered by them, the maternal vessels, through which the fœtus derived its support during the period of utero-gestation, will be securely restrained, by the collapsed or contracted state of the uterus bringing into close contact every part of its internal surface, and thereby obliterating its cavity.

An ample provision is made in the contractility of the uterus

* His convalescence is likewise mentioned in a letter from Mr. Thomas Richardson, dated Sunderland, eighth Month (August) 6th, 1822.

for this salutary event, without which the birth of a child would be almost invariably the death of the mother. If this inherent contractile power be not duly exerted, the deficiency should be suitably supplied, to obviate the fatal consequence which the want of it may occasion.

The contractile power of the uterus is so strongly exerted during the period of parturient excitement, as greatly to diminish its energy. It is, in fact, incapacitated for a time for making any further effort. This is the quiescent or recruiting period, that succeeds the event of parturition. After the lapse of about half an hour, the enfeebled state of vital power acquires renewed force, and enables the uterus to resume such further contractile effort as the exclusion of the placenta, or after-birth, may require.

During the suspended exertion from dependent power, there is but little danger of any considerable effusion from unclosed vessels. In general, the placenta retains its attachment, and will not be separated until the renovated powers of the uterus shall become susceptible of being excited by its presence. At that time, the occurrence of the pains denominated after-pains is nature's effective agent for the removal of whatever may be distending the uterus, and thereby prevent such an approximation of its sides as would destroy any cavity, or unoccupied space, into which any sanguineous effusion could be deposited. The process of placental delivery by spontaneous effort, is not less natural than that of fœtal parturition, and is, of course, under equally precise regulations: they are, indeed, different stages of the same function, and one is incomplete without the other.

It would not be less premature, or preposterously officious, to attempt to remove the placenta before the contractile powers of the uterus be restored, after the temporary exhaustion that ensues the expulsion of the fœtus, than it would be, at the full period of pregnancy, forcibly to extract the child without any parturient pain. In both instances, the interference would be pernicious, and would be likely to pervert, and render ineffectual, the natural effort that may be duly made for delivery.

The pain that occurs after child-birth, and previously to the removal of the placenta, denotes the exertion of a contractile power in the uterus, which is destined to finish the process of parturition: it should, therefore, be not only tolerated, but hailed as a remedial benefit, which will at once exonerate the uterus from its remaining incumbrance, and enable it to secure against hemorrhage, by the close contact of surfaces, which, when separated, formed the uterine cavity.

The prevailing practice of employing opium to allay after-pains, is founded on an incorrect estimate of the nature and

effect of those pains; and is in general inadmissible, from a probability of being injurious. It would be better that the uterus should be left to the natural influence of its contractile power to obliterate its cavity, than to resort to opiate or narcotic agency for quieting uneasy sensations, that are more likely to prove salutary than hurtful.

An uncontracted uterus, after the removal of the placenta, is a state fraught with imminent risk to the safety of the patient. The flooding that may ensue may be uncontrollable, and may, by its extent, be rapidly destructive of life. When any considerable effusion of blood continues after the exclusion of the placenta, prompt and scrupulous examination should be directed to the interior state of the uterus, knowing, if that organ had sufficiently contracted, there would be scarcely any bleeding. Coagulated masses of blood, large enough to distend the uterus, and to keep its bleeding vessels open, may be accumulated in its cavity. The hand, on these occasions, should be unhesitatingly introduced into the uterus, and the dilating contents wholly brought away, the removal of which, with the excitement produced by the manual operation, will be likely to restrain further bleeding, by inducing the degree of contraction that would prevent the possibility of its recurring.

In all cases of parturition, a sufficient interval after the birth of the child should be allowed for the uterus to recruit its exhausted strength before the placenta should be removed. When it is detached, either simultaneously with the expulsion of the fœtus or speedily after, the process is natural, and cannot be restrained or regulated: but this is not the ordinary course; the delay is often indefinite, and occasionally too long to admit of safely leaving the event altogether to a spontaneous termination. Under these circumstances, the utility of scientific interference is evinced, as it accomplishes with certainty that which could not be decisively effected without such assistance. After an hour shall have elapsed, a sufficient interval will have been afforded for the necessary renewal of uterine energy; and, if it be not exerted, it must be owing to a deficiency of power, that may require adventitious excitement. This would be furnished by employing such measured and regulated force in removing the placenta, as would at once effect its detachment, and stimulate the uterus to the degree of contraction that would close the vessels that had been opened by the placental separation.

After this desirable object has been attained, it would be much safer to leave the uterus to the stimulant influence of the slight pain resulting from the change of circumstances, and such incidental excitement as may have occurred, than to aim at subduing it by opiate or narcotic aid. If the after-pain be so excessive as to endanger inflammation, it should be appeased;

but its moderate existence should be regarded rather as salutary than morbid.

Much of the difficulty attending hemorrhage after parturition, may be obviated by strictly bandaging the abdomen immediately after delivery, which will both facilitate the contraction of the uterus, and check any occurring tendency to faintness arising from the abrupt removal of the mechanical support which had been afforded by the pregnant state to the adjacent abdominal viscera. When the pulse sinks into extreme smoothness, with an intermitting or faultering action, and the countenance and cutaneous surface assume a deathly paleness, whatever precautions may have been taken against the event, it is reasonable to presume that blood is largely escaping from the sanguiferous vessels. If it should not be apparent by any external discharge, still it may be effusing into the cavity of the uterus, which, though compressed, may not have contracted sufficiently to bring its sides into close contact with each other. Under such circumstances, the shuddering induced by the sudden application of cold water, to which may be added one-fourth part of vinegar, to the region of the abdomen and loins, and the more permanent sedative influence of continued topical cold in these situations, may serve to restrain the flooding, so as to prevent its going to a destructive extent. On these occasions, it is not enough to know and deplore the menacing difficulty, but active endeavours should be made to stem the dangerous current; and if the heart be yielding to a state of inanity and want of excitement, powerful stomachic stimulants, such as brandy, spirit of turpentine, &c. should be freely administered, with a view to counteract the dying debility and inertness to which vital power has been reduced.

Two objects should never be disregarded in the management of parturient patients: the one is, not to suffer excessive after-pain to prevail, lest it should produce uterine and peritoneal inflammation, by which puerperal disease is usually characterized; and the other is, to hasten, rather than check, the natural degree of after-pain, as being indispensably necessary to induce an effectual contraction of the uterus, by which alone destructive flooding can be securely obviated. Happily for the safety of female life in its parturient function, the provisions and resources of nature are fully equal to all the great exigencies of the occasion; but exceptions occur *(exceptio firmat regulam)* in which assistance may be required; and advantageous will it be in these instances for the patient, if the needful aid be rendered in strict accordance with existing necessities, by which alone can effectual benefit be afforded.

Public teachers, as well as practitioners, of the obstetric art, have differed in opinion relative to the removal of the placenta,

Whether its expulsion was not as much the natural office of the uterus as that of the exclusion of the fœtus, has been gravely debated; and the proposition has been affirmed and denied, according to the different views and convictions of the disputants on the subject. The placenta cannot be justly regarded as a *noli me tangere;* but its temporary station, and seasonable detachment, are objects of important concern in the practice of midwifery. Neither premature assistance should be obtruded, nor should the necessary aid be too long delayed. Both in the one case and in the other, destructive flooding may be incurred. The middle course, as on most other occasions, is the safest line of conduct: "*in medio tutissimus ibis.*" When the event is not anticipated by an unusually precipitate course of uterine contraction, the interval of from half an hour to one hour after the birth of the child would be the eligible period for assisting the separation of the placenta, by gently drawing the funis. A slight degree of force in this way, is ordinarily sufficient to induce the necessary contraction for effecting its prompt expulsion; when abdominal pressure, and the moderate pain that ensues the detachment, will cause such an approximation of the sides of the uterus, as will leave no unoccupied space into which any considerable effusion could be deposited.

A rapid transition from life to death from uterine flooding, without any consciousness of ailment, is an appalling liability. The event, however, is often recurring; and it may be affirmed, without fear of contradiction, that it is generally attributable to some incautious proceeding with respect to the period of removing the placenta; and to the state of the uterus, in regard to its cavity being open and distended, or effectually closed. No patient should be left, after the delivery of the placenta, whilst flooding remains, without examining the cavity of the uterus, to ascertain if there be coagula or other substances in it, preventing a close mutual contact of its internal surfaces: in which case, the obstacle to this desirable state should be removed; which, with moderate pressure over the region of the abdomen, also topical cold in that situation, if necessary, and the adoption of a general sedative or anti-stimulant treatment, will be likely to insure a favourable termination to every occurring difficulty.

Taunton; July 14th, 1824.

ART. VI.—*Remarks on Cholera.* Being an Extract of a Letter from B. L. SARDHAM, Esq. Surgeon to the Forces.

WE have had the most distressingly hot and oppressive season I ever recollect, with very little rain, and that not till late in the season, which was, of course, productive of disease in its most

acute form; fevers, with great determination to the head and liver, calling for the most prompt and decisive treatment, chiefly by the lancet, with active purging, &c. They were cases which kept me constantly on the alert, and admitted of little rest; but the result has amply repaid me.

I have been paying the closest attention to cholera, and have kept the few cases I have lately had, most minutely,—indeed, night and day; but, whether I shall ever have it in my power to generalize on the subject to any good purpose, time and opportunity must decide. What renders it so very difficult is, its having, even within my own observation, undergone such modifications, and assumed such varied shapes; and, from what I have casually heard, still greater varieties have occurred in other parts of the country. Nine well-marked cases presented themselves in May and June, the two first of which terminated fatally, and the morbid appearances in them have produced a very considerable change in my ideas as to the nature of the disease; and, I believe, enabled me to save the rest. I have been impressed with the opinion that it is in consequence of irregular or suspended action of the brain, all the other symptoms arise: the circulation is almost stopped; the blood retires from the surface; the heart is incapable of its office; congestion takes place in the head, and particularly the liver; the functions of the kidneys are suspended; violent cramps of the limbs, indeed of the whole body, take place, generally commencing in the toes and fingers, running often to the trunk; the abdominal muscles frequently drawn up into hard knots, or balls, as large as a turkey's egg; the inner coats of the stomach puckered up into deep folds, and the stomach itself almost into two separate bags; the calibre of the small intestines, in different parts, reduced or contracted so much as to be almost impervious, and their villous coat dry, and lined with a viscid mucus, feeling between the fingers like paste; the bladder a small and (as it were) solid ball, with a cavity which would not contain a nutmeg: indeed, all the secretions are suspended, save the diseased watery one from the stomach and lower intestines.

When I first had to encounter this disease, I objected to, and did not use, the lancet, because I knew inflammation of the stomach and intestines to be a consequence, and not a cause; for, in all those in whom it was most acute and terminated fatally in a few hours, neither the stomach nor intestines ever showed a red vessel, but there was the greatest venous congestion. But, since the change in my ideas relative to the nature of the disease, I have, where I could get it, immediately bled to the extent of from forty to even sixty ounces, and with the most marked good effects; the patients finding great and immediate relief, the heart resuming its office, the pulse returning

to the wrist, the surface losing its shrunken livid appearance and deadly coldness, and the cramps, vomiting, and peculiarly distressing and implacable thirst, being greatly moderated. The bleeding has been immediately followed by the exhibition of from one to two ounces of castor-oil, with from half to an ounce of oleum terebinthinæ, which generally almost immediately checks the vomiting, and removes the spasm; and, from its antispasmodic and purgative action, large watery, muddy, greenish, or black evacuations, are procured. If vomiting and spasm are not checked by the first dose, it is repeated in one, two, or three hours, according to the urgency of the case, with a blister over the stomach. I have then given a full dose of calomel, followed, a few hours after, by a couple of drachms of compound powder of jalap, which generally brings away a load of green or black bilious matter, to the almost certain relief of the sufferer. The jalap is not given where any disposition to spasm remains, but a couple of ounces of castor-oil; and should it have again been excited by the jalap, which it not unfrequently is, the oil is almost certain to relieve it, but particularly when combined with the turpentine. The calomel appears to me to be perfectly useless, if given before the oil and turpentine, which quickly and certainly finds a passage, and seems to remove the spasm of the stomach and constriction of the small intestines. Indeed, unless the calomel is preceded by it, I believe it seldom passes the pylorus; for, at the time it was cried up as the sovereign remedy in 1817, I saw it constantly rejected; and, when it was not, I found it in the stomach.

I am now, of course, speaking of the disease in Europeans; for opium, in large doses, with natives often succeeded, although in the former I never saw it do any good: indeed, any strong spirit often did relieve the natives.

The warm-bath I have given a fair trial to, but, in cases of pure cholera, I have never seen more than temporary relief from it while in the water, and most of the worst symptoms appeared aggravated by it on coming out: indeed, it seemed to increase mischief in many, and the cries of some were redoubled on immersion,—they could not bear it. How is this to be accounted for? I think by its increasing the congestion in the head, and thus still more oppressing the brain, the powers of which are already, as I conceive, diminished, if not suspended. I deeply regret that my dissections in these cases, in 1817, when I had such ample opportunity of seeing it in its most fatal shape, did not extend to the head; yet such was the pressure of the moment, and being for the greatest part of the time alone, I really had not leisure: the appearances, however, found in the

crania of the two I lost this season, now account to me for the state in which I saw some die in 1817.

In October and November, bilious remittent fever made its appearance in quite an epidemic form, but, although acute in its attack, it was ductile to treatment, and generally suddenly yielded. I did not lose a patient: very few escaped it, officers, women, or children, and patients in hospital. In November, violent spasms or cramps frequently succeeded the attack, always attended with giddiness, within three or four hours, precisely of the same appearance as in cholera, save that the skin was hot, with an oppressed hard pulse; but in these the warm bath was decidedly beneficial, to which sometimes a full bleeding, with the oil and turpentine, they almost immediately yielded.

Meerut; December, 1823.

ART. VII.—*On Cynanche Trachealis.* By GEORGE MEYERS, M.D.

ALTHOUGH Etmuller, Cullen, and other nosologists, have given correct definitions of the symptoms of this disease, it will be, perhaps, of more practical importance to be content with a more simple detail of the symptoms, as connected with the relative situation of the disease in question. The seat of this disease, then, I would say, is in the cavity of the trachea, or windpipe, and arises from high inflammatory action, whereby an extensive morbid secretion is thrown out from the mucous membrane lining the internal surface of that organ. This very soon becomes of a thick gelatinous nature, and consequently prevents the accustomed passage of air to the lungs; and, in proportion to its continuance or increase, entirely obliterates the canal, and the patient, of course, becomes suffocated.

The attack of this very formidable disease is particularly sudden, and comes on with a sense of uneasiness about the throat, constriction of the fauces, and a difficulty of respiration, which are commonly supposed to be the consequence of an ordinary sore-throat. This difficulty of breathing is attended with a peculiarly-marked hoarseness and croaking sound; and, upon examining the fauces, the velum pendulum palati, and the whole of the neighbouring parts, are observed to be parched and dry. The commencement of the attack is not accompanied with any completely-marked cold shivering fit, as is usually the case in most instances of phlogosis; or, if it be, the patient is too much oppressed with the foregoing symptoms to allow him to name that as the precursor of them. It generally happens that the patient has been labouring under the influence of this disease many hours before medical aid is had recourse to; and, if two or

three days have elapsed before proper assistance is procured, the disease has, in all probability, so rapidly advanced, and so thoroughly formed itself, as to baffle the utmost exertions of the practitioner. At this period the countenance becomes ghastly, the lips pale or livid, the pulse depressed and tremulous, the extremities cold, and the ability to swallow even liquids impracticable.

When called upon under these most distressing and alarming circumstances, it is to be feared little can be done, for the disease has arrived at that pitch of despair that scarcely any human interposition will ever avail, even in rendering a palliative. We are nevertheless bound by the laws of humanity to attempt some means of relief; and the annexed cases will explain how far we are justified in having recourse to prompt and active measures, since, in one of them in particular, it must be allowed there did not appear to be the smallest prospect of success, and yet ultimately the patient recovered.

Case I.—William Josselyn, ætatis eleven, had been attacked with sore-throat and hoarseness three days before I saw him, and had merely been taking a little purgative medicine, and using a common vinegar-gargle, by his mother's desire. I saw him on the fifth day of the attack, when he was labouring under urgent symptoms of cynanche trachealis, and to so alarming a degree, that I ventured to predict a fatal termination within twenty-four hours. Leeches and a blister to the throat were immediately had recourse to, and four grains of calomel were given every second hour; but, within ten hours from the time of my first visiting him, he breathed his last.

The following morning I obtained permission to inspect the part; and, upon laying open the trachea, from the cricoid cartilage to its termination in the bronchial tube, I found the whole cavity so completely blocked up with dense coagulable lymph, that I could with difficulty pass the handle of my knife along. I carefully at length separated a large portion of it, and was struck with the florid appearance of the internal coat of the trachea, much resembling scarlet cloth as to its colour. It will be observed, this disease had been of five days' standing only, and must indisputably prove the rapidity with which it advances, and the impracticableness of removing it when thus formed and fixed. This dissection likewise throws additional light upon the treatment necessary to be adopted and pursued; and, although it may not afford any reason for employing a fresh or novel plan, most unquestionably tells us that our efforts hitherto made must be more vigorously followed up.

Case II.—John Banks, ætatis forty, had been attacked with decided marks of cynanche trachealis for upwards of forty-eight hours previous to my being called in. I found him with very difficult breathing, accompanied with a stridulous noise; the appearance of the fauces parched and dry; countenance ghastly; lips of a deep livid hue; pulse extremely laboured and low, not exceeding forty; extremities cold; bowels costive; tongue foul, and covered with a thick white incrustation; great difficulty in swallowing. Leeches were immediately applied in a line

with the tracheal tube, and not transversely; immediately afterwards, a blistering-plaster in the same direction; four grains of the submuriate of quicksilver were taken, and desired to be repeated every fourth hour.

The following day, July 27th, except the bowels having been relieved, all the symptoms were aggravated. Two grains of the submuriate were now ordered every second hour. Fomentations, and afterwards friction to the feet and legs. Nourishment, tea and gruel only.

28th.—The difficulty of breathing somewhat relieved, and the same planto be punctually persevered in.

29th.—Much improved; the breathing being more natural, and free from the stridulous sound; the pulse more regular, about sixty; the countenance a little animated, and the capability of swallowing accomplished with tolerable facility. The submuriate was now ordered to be continued every fourth hour, with the fomentations and friction.

30th.—Much better, and sitting up in his chair; the salivary glands excited, and spitting up thick coagulated mucus. The submuriate, in doses of ten grains, was now ordered twice in the day only.

31st.—Apparently quite well. Left off his medicine, and kept the bowels open with laxative pills, merely as occasion required. Had no relapse.

Case III.—William Goddard, ætatis two, attacked with complete symptoms of cynanche trachealis about twelve hours before I was called in; and, although the general symptoms were not quite so distressing as in the preceding case, yet the croaking sound was more considerable and conspicuous. Leeches were immediately applied as in the last case, succeeded by a blister in a longitudinal direction. Two grains of the submuriate of quicksilver were ordered every second hour; and the child was to be immersed in a warm bath, a little above the hip, every fourth hour, and to be kept nourished entirely by tea and thin gruel.

The day following (January 29th), the breathing was no worse, and the same plan was ordered to be regularly continued.

30th.—Better; and a quantity of saliva produced, with thick phlegm frequently thrown up. The medicine to be continued every six hours only.

31st.—Much relieved from the laborious breathing, as well as from the croaking sound; the countenance more lively; able to swallow freely; bowels pretty well.

February 1st.—The child quite free from disease, sitting up; and ordered a little rhubarb powder, to be taken occasionally, if the state of the bowels should require it.

5th.—The child continues quite well.

Case IV.—Elizabeth Powell, ætatis nine weeks, seized with true marks of cynanche trachealis ten or twelve hours only previous to my seeing her. The breathing was laborious, and the croaking sound very considerable. Half a grain of the submuriate of quicksilver was ordered every third hour, and semicupium to be adopted every second, third, or fourth hour, according to the violence or increase of the symptoms.

The following day (April 28th), some little improvement in breath-

ing, and an evident decrease of the croaking sound. The same plan to be continued as before.

29th.—The urgent symptoms all much relieved. The submuriate to be repeated every six hours only, and the semicupium to be employed night and morning.

30th.—The child now breathes with great facility, and is altogether much improved.

May 1st.—Quite well, and free from the disease altogether.

From the view I had taken of the morbid condition of the internal lining of the trachea in Case I., I am induced to believe that no relief can be obtained in this disease, unless it can be prevented in time from going on so far as to obstruct the passage of air to the lungs; or, unless, when this obstruction is already formed, it can be removed by artificial means, or by the power of medicine internally administered. The former can only be accomplished by the operation of tracheotomy, which, although perhaps it might afford trifling and temporary relief, would eventually fail as a remedy; but, as it has been attempted by the late Mr. Chevalier and others, it must be admitted that it is a subject worthy of some consideration. According to the latter, the adhibition of mercury appears to have produced wonderful effects in mitigating and relieving all the symptoms, very soon after it has been employed, for twenty-four hours in succession. Friction along the course of the tracheal tube with a liniment of the submuriate of quicksilver, would also be highly proper; but this surface is obliged to be covered with leeches and a blistering plaster immediately, to suppress the active inflammation going on, so that there is no opportunity of employing that process to advantage. It would appear that the mercury acts more immediately upon the parts connected with the seat of the disease, because a copious discharge of froth and saliva is produced, and frequently even thick flaky mucus is thrown off from the throat, after the second day of its repeated and continued adhibition; so that it would almost be presumed that the trachea itself is affected by it, and, in consequence, the morbid secretion there generated is loosened and hawked up, as in Cases II. and III.

By the view of Case I. post mortem, I am inclined to feel convinced of the necessity of applying friction, leeches, and blisters *longitudinally*, as in Cases III. and IV., and not circularly, as has generally been the plan hitherto adopted. Semicupium, or fomentations, with subsequent friction, every second, third, or fourth hour, according to the urgency of symptoms, are highly useful; and the diet should consist of little else than tea and gruel.

Manningtree, Essex; August, 1824.

Art. VIII.—**Case of Ascites during Pregnancy.* By H. L. Sanders, Esq. Surgeon.

The remarks of a contemporary Journalist (Dr. James Johnson) have elicited from me the following case, which, if you deem it worthy a place in your valuable Journal, you will oblige me by inserting.

Mrs. Flowers, a coachman's wife, and the mother of four children, of a phthisical habit, ætatis thirty-seven, was seized with peripneumonic symptoms, about the fourth month of her pregnancy. She was freely and frequently bled, and, with the employment of antiphlogistic expectorant remedies, under the superintendance of a neighbouring practitioner, was much relieved. About the fifth month, her difficulty of breathing returned: she was again copiously bled by the same practitioner. Soon after this her feet began to swell, and symptoms of ascites and hydrothorax were but too apparent. She sought the advice of the physician-accoucheur to a neighbouring Dispensary, who permitted me to take charge of her, seeing her occasionally with me.

A cough (of the dry kind), dyspnœa, scantiness and almost total suppression of urine, general tenderness over the abdominal integuments, rapid collection of fluid within the cavities, a sensation as though the fœtus were unusually low and weighty, with a mind pertinaciously rivetted on the idea that she should die undelivered, with the greatest horror of such an event, were among the most prominent of my patient's complaints: the respiration being distressingly laborious, and only tolerable in an upright position; urine thick and very scanty, bowels obstinately costive, and sleep very much disturbed.

These symptoms were occasionally alleviated, and the patient's mind soothed, by the exhibition of conium, digitalis, squills, salines, &c. with frequent and large doses of castor-oil, and continued without much intermission until the ninth month of her pregnancy, when periodical pains, with sanguineous discharge, and other symptoms of speedily approaching labour, came on. Labour, however, did not take place until another month had elapsed; during which time the ascitic symptoms were greatly aggravated; her cough and dyspnœa (which was

* A very interesting case of ascites during pregnancy, in which the patient was repeatedly tapped, is to be found in this Journal for March, 1802. It is from the pen of Sir L. Maclean; and we hope to be able, in a future Number, to lay before our readers the valuable results of this gentleman's further experience on this subject.—Editors.

partially relieved by blistering,) was distressing; her mental agitation was so great as to simulate mania. On that day four weeks on which her symptoms began to increase, she was delivered, after a natural and easy labour of about ten hours' duration. The infant, a boy, (the most emaciated I had ever seen,) died about ten days after in a convulsive paroxysm. On the third day, milk appeared in both breasts, but she could not be prevailed upon to suffer the infant to suck, as placing it to the breast produced the most unconquerable delirium. On the death of the child, her milk speedily receded. During the recumbent posture, her ascitic symptoms were much ameliorated; her mind became tranquil, and slight hopes were entertained by her friends of her recovery. On resuming her domestic avocations, her phthisical symptoms returned, and after lingering four months longer she died.

Remark.—I conceive the hydropic tendency was much increased by the frequent and copious bleedings during the incipient stages of pregnancy, and that the inflammatory appearance of the blood, usual during that state, might have urged its abstraction to a larger extent than, under other circumstances, might have appeared warrantable. When ascites became evident, although the symptoms were greatly aggravated by pregnancy, I conceive that paracentesis abdominis was perfectly inadmissible, by reason of the morbid condition of the constitution generally. This patient had an idea that her period of gestation exceeded the usual term by four weeks; and, from the very minute inquiries that I instituted, I am decidedly disposed to support the same opinion, when I reflect on the naturally feeble and artificially reduced powers of the constitution of the patient, insufficient either to complete the development of the embryo, or to enable the uterus to perform its last office —the expulsion of the fœtus.

Cleveland-court, St. James's-place; Sept. 15th, 1824.

Art. IX.—*On Nævi.*

To the Editors of the London Medical and Physical Journal.

Though discredited by most medical men, there is no point of more general popular belief, and especially among females, than that "mother's marks," as they are vulgarly termed, are caused by some sight or longing of the mother during pregnancy. I am acquainted with a lady, the mother of a fine family without a blemish, who is much distressed by a discoloration of this description on the face of her youngest child, and

which she believes was produced by going to see some wax-work figures, among which the assassination of Marat, concealed behind a curtain, is calculated to produce great horror in a delicate female: and certainly the discoloration in question has a strong resemblance to the blood sprinkled over the breast of that horrid monster. If so, it is deserving of notice as a physiological fact, that it took place at the very earliest period of gestation.

It would be esteemed a singular obligation, if any your numerous readers can point out a remedy for the defect in question: and it would prove no inconsiderable public benefit if the publication of this letter, by meeting the eyes of those who have power to remedy the evil in question, should tend to diminish the number of disgusting and distressing objects who exhibit themselves in the streets to obtain charity; as I am certain that such sights have harassed and dwelt upon the minds of many nervous, delicate invalids for a considerable time, to the great injury of their health, of both body and mind. Whenever such spectacles of mutilated deformity or disease are proved, by medical certificate, to be unable to maintain themselves otherwise than by begging, there can, I think, be as little question, in a Christian country, of the justice of supporting them at the expense of the State, as of the policy of withdrawing them from the public gaze.

I am, Gentlemen, your most obedient servant,

NÆVUS.*

3d September, 1824.

ART. X.—*Case of Lithotomy successfully performed on a Horse.* Communicated by JAMES WHITE, Esq. Veterinary Surgeon.

To the Editors of the London Medical and Physical Journal.

GENTLEMEN,—The following account of the extraction of a stone from a horse's bladder, has been communicated to me by Mr. W. MOGFORD, who was some years ago my pupil and assistant, and is now a respectable practitioner at North Low, near Okehampton, Devon. Should you think it worth the notice of your readers, I will thank you to insert it in your valuable Journal. I am, Gentlemen, your obedient servant,

JAMES WHITE.

Wells, Somerset; August 9th, 1824.

The horse is the property of James Veal, Esq. near Hatherleigh, Devon. When taken up to be broke, he was found very

* The writer of the above is an able and respectable physician, well known to the public, as well as to the—EDITORS.

restive, kicking off most of those who attempted to ride him: in consequence of this he received very rough usage, and has since been ridden rather hard. When Mr. Mogford was desired to attend him, he observed a peculiar stiffness in the movement of the hind legs; urine of a high colour and pungent smell, and a dribbling of urine from the penis for some time after staling; pulse between 70 and 80, and hard. By bleeding freely, clysters, fomenting and embrocating the loins, and a week's rest, he appeared sufficiently recovered to be sent to grass. He soon leaped over the gate of the field, and, crossing the country, got back to some pasture where he had been usually kept. This exertion caused a return of his complaint, and Mr. M. was again desired to attend him. He found him in the same state as before described. Wishing to examine the bladder, he introduced his hand into the rectum for that purpose, and immediately felt a hard substance, which appeared to him to be a stone in the bladder. He communicated the circumstance to Mr. Fisher, surgeon, of Hatherleigh, who could not be persuaded that it was a stone, until he had made the examination himself, when he also felt it distinctly. Mr. M. then proceeded to the operation in the following manner:

Having drawn out the penis from the sheath or prepuce, he passed a rod of whalebone up the urethra, until the end of it could be felt in the perineum. He then cut down upon the end of the rod, and through the opening thus made in the urethra he introduced a director, and with a probe-pointed bistoury continued the opening as far as the left side of the anus. He then introduced his right hand into the rectum, and the two forefingers of his left hand into the bladder, and, without any difficulty, pushed the stone against the middle finger, by which he guided it to the neck of the bladder, and then easily forced it out through the opening in the urethra. The stone weighed rather more than four and a half ounces. Some parts of the stone appeared to have been broken off and left in the bladder: these were easily removed by means of a bit of soft sponge tied to a whalebone probe, and some warm water. The wound quickly healed, except a small orifice, through which a part of the urine still passes; but the horse has worked hard since, and suffered no inconvenience from it. Mr. M. has no doubt that a stone of seven or eight ounces might be thus extracted.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

Relating to the History or the Art of Medicine, and the Collateral Sciences.

Floriferis, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ART. I.—*On the Use of the Tartar-Emetic Ointment in Epilepsy.* By JOHN CREIGHTON, jun. Esq. Member of the Royal College of Surgeons in Ireland.—(From the Transactions of the Association of the Fellows and Licentiates of the King and Queen's College of Physicians in Ireland.)

MANY of the children admitted on the establishment of the Foundling Hospital in Dublin, having been affected with epilepsy, the attention of the medical attendants was particularly directed to their relief; and, upon reading the account which Dr. Jenner gives of his success in curing several analogous complaints, by means of the tartar-emetic ointment, we were induced to make a trial of that remedy. For this purpose some of the worst cases were chosen: two of them rendered perfect idiots by the frequent recurrence of the disease, and others with such aberration of mind, and weakness of intellect, as to be but few degrees removed from the same degraded state. Though we have it not in our power to assert that a complete cure has been effected in any case, yet we have the satisfaction to state that the fits are now, in each patient, comparatively of rare occurrence, and are of so mild a character, as not to interfere with the health or strength of the individual. Indeed, these hitherto helpless objects are now capable of applying themselves to various useful employments, and are no longer a burthen to the Institution.

Each patient was allowed to remain a certain time in the Infirmary before the use of the ointment was commenced, both to enable us to ascertain the time of recurrence and duration of each fit, and also to submit them to an antiphlogistic regimen. This had no influence whatever on the disease itself, and was suggested to us merely from the plethoric habit of body which appeared in all of them, on their first coming into the Infirmary. The ointment made use of was in the same proportion as that used by Dr. Jenner in his cases, with some trifling variation.

The eruption produced by the friction of tartar-emetic ointment varied very much, as to its first appearance, in the different cases in which it was tried: in some it appeared in twenty-four hours, in others not for three or four days. The imperfectly-formed pustules, in some instances, were small, and at a distance from each other; in others, large and numerous; and, in two or three instances, they degenerated into painful, irritable blotches, which gave the patients some trouble for a day or

two, chiefly arising from the pressure or rubbing of the clothes against them. On this occurring, the ointment was immediately discontinued; but, with this exception, although we have used it extensively in various complaints, it has not been followed by any injurious effects, or been the occasion of tumors or sores difficult to heal.

The blotches sometimes produced by the ointment are rather painful for a day or two, when touched or rubbed. In a short time they are covered with several dry crusts, elevated above the surface of the cuticle, and lying one over the other. These have been called warty, cartilaginous elevations; and the successive layers of the crusts have been compared to the coats of an onion. They, however, very soon come off, leaving the parts underneath perfectly sound: in fact, if not interfered with, they will always heal of themselves. The simplest dressings are the best for them, while in the inflamed state; and the chief thing to be attended to, is to preserve them from friction. It is to be observed, that the eruption is not confined to the spot on which the ointment is rubbed, it most frequently appears in very remote parts; thus proving that its action is in some degree on the constitution.

Case I.—July the 11th, 1822. Catherine Hunt, admitted with epileptic fits, aged twenty-seven, was completely idiotic, and incapable of giving any information respecting her situation. Her nurse said that she had been regularly afflicted three or four times a day, in the most violent manner. She is very large and strong, but has never menstruated: she has not had epilepsy from infancy.

It appears that, during childhood, she was of a remarkably dull intellect; and, when arrived at a certain age, so viciously inclined, that it required constant watching and control to keep her within the bounds of propriety. She was apprenticed out of the Institution at the age of fourteen, but was in a short time sent back by her master, in consequence of her being attacked with epilepsy. From that time to the present, being a period of thirteen years, she has had the fits violently and constantly.

July 12.—Sixteen ounces of blood were ordered to be taken from her, and her bowels to be kept regular.

15th.—Frequent fits. The tartar-emetic ointment was now rubbed on her arms.

22d.—No recurrence of fits, but an appearance of fulness about the head. She was bled to the extent of twelve ounces, and the ointment was directed to be rubbed each night on different parts of her body.

26th.—No fits; but the ointment was discontinued, as the parts rubbed, particularly the back, between the shoulders, presented large inflamed blotches.

27th.—The back not so sore; the blotches covered with dry crusts. Simple dressings ordered.

29th.—The back nearly healed. Has been free from fits.

August 1st.—The ointment was now directed to be rubbed on the thighs. No fit.

13th.—Ointment continued. No fit.

14th.—Appears dull and heavy. Twelve ounces of blood directed to be taken.

21st.—Ointment discontinued, in consequence of great soreness. One slight fit.

September 12th.—Up to this period no fit. On the morning of the 13th, she had a fit of short duration. The ointment to be again used.

20th.—The ointment discontinued.

21st.—One short fit, the first for the last eight days.

23d, 25th, 28th, 30th.—She had one slight fit each day. On the 5th October, she had two fits, but by no means severe. The ointment resumed.

15th.—No fit since the 5th. But she has again become heavy and stupid. Ordered to be bled to the extent of twelve ounces.

On the 18th, one short fit. On the 24th, she was again bled.

28th.—Two severe fits. It is now twenty-eight days since she had any repeated attack. We are inclined to think that they are influenced by some effort to menstruate. She is placed for some hours daily in a hip-bath. Arms again rubbed.

30th.—One fit while in bed this morning.

She has now become much more rational. She is lively and animated, and anxious to be employed. At her own desire, she works daily in the laundry, and cheerfully discharges any duty allotted to her. She is clean in her person, and her appearance and habits have undergone a complete reformation.

Up to the 10th of March, 1823, when she returned to the country, she has had occasional recurrences of the epileptic attacks, once in three weeks or once a-month, but of such short duration, as not to interfere with or prevent her following her daily occupations. In July last, we heard from the person with whom she is now living, that she had the fits at times, but that she did not mind them, and had become an industrious and hard-working servant.

Case II.—John West, aged seventeen, has had epileptic fits from infancy, occurring with great violence six or eight times in a fortnight. He appears nearly idiotic; his hearing is impaired, and his intellect dull; his limbs are weak, and he walks with difficulty. As it would be unnecessary to detail the treatment in each of these cases, it being nearly the same in all, we shall only give the general appearance of the patients on their admission, and their present state of health.

This patient used the ointment, with occasional intermissions, till November, 1822. He has perfectly recovered the use of his limbs. He attended daily in the school, and is now so far educated, that he reads and spells well. He had a fit once a-month, or once in six weeks. He returned to the country in March, 1823; and is now, we understand, although subject to occasional slight fits, a strong and healthy boy.

Case III.—Michael Franklin, aged nineteen, has been subject to epileptic attacks as long as he can remember. They come on three or four times in a month, leaving him in a state of stupor for several days afterwards. His intellect is not impaired, but he seems incapable of making any exertion. He used the ointment during four months, with occasional intermissions. He is now so far relieved as to be employed in the garden of the establishment. He has a fit once a-month; but

it lasts only a short time, and he immediately recovers from its effects.

Case IV.—William Ord, aged nineteen, says that he has epileptic attacks once or twice in a fortnight; that they continue a long time; and that, before they commence, he generally feels a pain at each side of his head, immediately under the parietal bones. He appears healthy and strong in other respects, and is in full possession of his intellectual faculties. On the day of his admission he had a severe fit, which lasted upwards of twenty minutes, and was succeeded by the loss of strength and memory, which continued for some time afterwards. He commenced using the ointment, and continued under treatment for two months. He was apprenticed as a servant in February, 1823, and had not a fit for two months before he left the Institution.

Case V.—Mary Lynch, aged fourteen, has had epilepsy for several years. The fits come on generally once a fortnight, and are repeated, with little intermission, for the space of one or two days, being always preceded by a pain in the head a day or two before the accession, and followed by great weakness. On her admission, she was dull and stupid, the fits being very violent and frequent. She has now become lively and intelligent: the fits do not occur oftener than once in two months; and on one occasion she has had not a fit for three months. She is at present employed as a servant in the establishment.

Case VI.—Henry Woodgate, aged twelve, was almost in a lethargic state on his admission. He used to sit for hours in the same posture, and was roused from it with difficulty. He had epileptic fits three or four times in a-day; the intellect was obscured; and he appeared to be fast approaching to a state of idiotcy. Though the disease resisted for a long time this plan of treatment, yet its progress was at length so far arrested, that he became capable of instruction: he attends in the school, and his teachers say he is by no means dull or stupid. The fits come on once or twice a fortnight, and they never recur on the same day.

Besides the above, there are several other cases at present under treatment, and which are progressively improving.

The tartar-emetic ointment has been used at the Foundling Hospital in every case of hooping-cough, during the last year, with evident good effect: the paroxysms were diminished not only in violence and frequency, but the progress of the disease so much shortened, that in no instance did it continue more than three weeks. The application of the ointment in these cases was along the course of the spine.

Art. II.—*On the Pathology of Epilepsy.* By Robert Reid, M.D. Licentiate of the King and Queen's College of Physicians in Ireland. —(From the Transactions, &c.)

Medical science has made such rapid advances within the last few years, that an immense number of important facts have been developed relative to the nature of diseases. Though the human mind may be incapable of appreciating the modes of action of ultimate causes, yet the laws which are obeyed in the animal frame are fixed and immutable.

Many of the errors, both in the theories of diseases and in the modes of treating them, may be attributed to physicians mistaking effects for causes. In no instance is this more conspicuous than in the history of the disease called Epilepsy. Although the enumeration of writers who have treated on this subject would occupy a volume, yet the last elaborate author (Dr. Cooke) is compelled to acknowledge, that much is still to be known before the true nature of the disease can be understood.

About eight years ago, when attending the hospitals of the House of Industry, with the late Dr. Edward Percival, our attention was particularly directed to ascertain the efficacy of spirit of turpentine as a remedy, at that time recommended for the cure of epileptic diseases. While studying the phenomena incidental to such a formidable disorder, I felt convinced that an extensive field for investigation lay yet untried, notwithstanding all that had been written on the subject.

Early in the year 1817, I laid before the public a treatise on Tetanus and Hydrophobia, in which it was stated, that the moving powers of the human frame are under the influence of the nervous mass situated in the spinal column, and that they hold to that mass as to a reciprocal centre. This idea is now very generally adopted. In considering the phenomena of epilepsy, a derangement of the moving powers forms the first and most characteristic feature of the disease: it, therefore, should be ranked among those diseases to which what I have denominated the *spinal system* is liable.

Pure epilepsy is very seldom fatal. In thirty-four cases which came under my notice, two only died of the disease, who, on examination after death, exhibited no morbid appearance sufficient to account for death, until the spinal column was opened along the cervical vertebræ, when the membranes enveloping the medullary mass appeared covered with a minutely injected vascular tissue.

The morbid states of other parts, particularly in the head, which have been the immediate cause of death in cases previously subject to epilepsy, can only be considered the consequences; for similar states have been met where no such disease attended. It is important to be aware, when investigating the diseases incidental to the spinal system, that they frequently run into each other. Thus a person, while under treatment for epilepsy, may suffer tetanic spasm, then chorea, then catalepsy, &c. A case of this kind occurred to me not long since, of which the following is an abstract:—

June the 8th, 1818.—Mr. ——, ætatis eighteen, subject to epilepsy; has no apparent malformation of the head. Has been several years affected with the disease, the commencement of which he attributes to fright. Remarks that his memory is of late very much impaired. The fits are very frequent, sometimes twice a-week, sometimes three times in the same day. Is generally attacked early in the morning, without any previous notice, or a sensation of cold in any part of the body. The pulse is very contracted, irritable, and quick. I determined, if possible, to see him during the paroxysm; and in five days after, (13th of June,) on visiting him about eight o'clock in the morning, when he was dressing, I found that there was not the slightest pulsation at either

wrist, which previous observation in other cases enabled me to conclude was the indication of an immediate attack. In two minutes afterwards he fell in the fit. The upper extremities were particularly affected, with general tendency to emprosthotonos. When the spasmodic actions had almost subsided, the pulse became enlarged, soft, and regular. The next fit was on the 19th of June: he was ordered a blister between the shoulders, over the spine, with directions to keep it open for some time; but he allowed it to heal, and had another fit on the 26th. He, however, appeared to improve in every respect.

A fit occurred on the 1st of July, when he was ordered a purgative, with spirit of turpentine, to be repeated every morning. This, at first, seemed to induce giddiness and sickness at stomach. It caused copious evacuation from his bowels, and a frequent desire to pass urine, attended with some smarting and irritation at the extremity of the urethra.

July 18th.—Since 26th June he has had no fit. The irritation of the urethra still continues severe. A few drops of blood are discharged after passing urine. The quantity of turpentine has been gradually lessened to five drops every morning.

August 1st.—The effects of the turpentine have, for some time, entirely ceased, and he had a fit yesterday. He could not be persuaded to continue the turpentine.

August 30th.—Has had several fits since the 23d, and his mental powers are very much impaired. This evening, he is delirious at intervals, and complains of severe pain following the course of the nerves of the lower extremities, with frequent sensation of cold along the spinal canal, sometimes ascending towards the head. He then feels violent pain in the occiput, extending towards the central regions of the head. He soon after speaks delirious. During one interval, he mentioned that he distinctly saw a crab upon his pillow; but that he knew it was only imaginary, yet could not prevent such an impression on his vision.

August 31st.—Has frequent tetanic spasms of various muscles, but no difficulty of swallowing. The cerebral affections have been relieved by leeches and cold affusion to the head, and active purgatives. During the operation of the purgative medicine, he had strong tetanic spasms of the parts which were usually affected in his epileptic paroxysms. Has no pain of head; perspiration copious; tongue white in the centre; pulse quick, but soft and regular. The tendons of his wrists and arms remarkably tense. Has now some inclination to sleep.

September 1st.—Remained easy during the night; has had slight cramps in the lower extremities, and is often affected with convulsive laugh, which he says, he cannot avoid, though he knows no cause of it. Pulse quick; head hot; tongue furred. Leeches were applied to his temples, and the cold affusion to his head; soon after which, the above symptoms ceased, and he inclined to sleep. His father reported to me, that last night, while at the night-chair, he became completely cataleptic, but retained the power of vision and hearing. His father desired him to endeavour to move his fingers, at the same time putting his own in a similar motion. After some apparent internal exertion, he succeeded. His father then moved his wrists, and persuaded him to try

that also; after similar exertion he performed that movement; and so one part after another, until he recovered.

September 3d.—No return of cramp; skin soft and moist; rigidity of the tendons gone; hearing acute; vision wonderfully improved, so that a glass, which he has been for some time obliged to use, is not required, and does not now match his sight. His memory and other intellectual powers are natural. Feels his head get giddy after speaking much, and strong light is unpleasant.

September 4th.—Feels well. Has occasionally, for the last two days, a disagreeable sensation of cold in his feet, with inclination to shivering, which goes off by perspiration.

He continued convalescent, without any return of fits, till the middle of September, when he went for change of air into the country. I think it more than probable, however, that, after some time, he may have had a return of the epileptic fits.

I have made choice of the above case, as being the most remarkable for the number and variety of the changes from one spinal disease to another. It is at present impossible to determine the true seat of epilepsy, by the morbid appearances detected in epileptic patients after death: it is, therefore, necessary to combine with them the train of operations which occur during a paroxysm of the disease. By such investigation, the probable sources of the morbid phenomena may be discovered. In all the cases I have had an opportunity of observing, the rapidity of the changes in the morbid actions during the paroxysm, often differed very much; but the regular succession in which they followed each other was invariable.

As this disease must have been the same in the earliest periods of its occurrence that it is found to be at the present day, I shall refer to the actual operations, as they occur before our eyes, rather than to any written authority on the subject. This I am the more inclined to do, as the unfortunate frequency of the disease may enable every practitioner to judge for himself.

By considering the phenomena according to the regular train in which they are developed, it would appear that each succeeding occurrence is the natural consequence of that immediately preceding. It will be found, on careful attention, that the first symptom of an attack is the suspension of the action of the heart, and consequently an intermission of the pulse, which may continue from a few seconds to about three minutes, which was the longest period of intermission I have as yet known.

The *aura epileptica* can only be considered a premonitory symptom; for, in many cases, it never occurs. If all the other powers which contribute to circulate the fluids in the animal frame became quiescent at the time the heart ceased its activity, the well-known phenomena of fainting would be the consequence. But, during the epileptic quiescence of the heart, it appears that an accumulation of blood is taking place in another direction; for immediately, often instantaneously, a tetanic rigidity of the entire frame succeeds, during which the air is sometimes so suddenly expelled from the lungs, that the patient utters a piercing shriek. I have seen patients hop five or six times on both feet, with their

bodies perfectly rigid, before they fell. It has been attempted to prove in the Treatise before referred to,* that the tetanic rigidity of all the muscles of the frame was consequent upon accumulation of blood, or other irritation in the spinal nervous mass. That this is the case in the present instance, is confirmed by the examination of those cases which have proved fatal after only a few paroxysms, and before the injurious effects of the disease were conspicuous in other parts. When this accumulation amounts to compression of the nervous structure, the patient falls, and all the parts are for a moment relaxed. The animal economy now imperiously requires the function of respiration, which had been suspended during the phenomena before mentioned; but this suspension of respiration was gradually causing an accumulation of blood in the head, so as to bring the brain into an apoplectic state, by which means the control of the brain over muscular action is interrupted. Hence arise the irregular actions of the complicated organs of respiration, forming those convulsive struggles which are so peculiarly characteristic of this disease.

It is at this period that the unfortunate patient may have the paroxysm almost instantly terminated by mechanical means. Though it may be more proper to defer stating any mode of relief, until speaking of the treatment of the disease in general, yet the means alluded to tend to elucidate so much the nature of the convulsions, that they could not with advantage be omitted at present. Careful observation in a number of cases has convinced me, that there are two modes by which the convulsions may be suppressed, until the brain recovers influence sufficient to direct the muscular activity. During the inordinate struggle to perform respiration, the practitioner may abstract some of the force applied to the respiratory organs, by attracting the exertion in another direction. Thus, while the hands and arms are violently contracted, if the attendants forcibly extend them, and open the fingers, so much exertion is involuntarily made by the patient to oppose this, that the violent operation of the respiratory muscles subsides, the organs fall into their natural train of action, the patient draws a heavy sigh, and the paroxysm is at an end. Any unusual irritation may have this effect; among others, that which is stated to have been tried by Dr. Pickels, in his important paper "on the Discharge of living Insects from the Stomach." The other mode of putting a stop to the paroxysm, as far as I have experienced, is much more powerful, as it operates by suppressing the powers which excite the muscles into action. The peritoneum appears to be connected by the strictest sympathy with the nervous apparatus of the spine; for, when tetanus takes place, the tension of the peritoneum is one of the first remarkable symptoms; and it is well known what extreme debility attends contusion, inflammation, or other injury of this membrane.

When making experiments some time ago, for the purpose of ascertaining what part of the animal frame was particularly acted on by nux vomica, when taken in excess, I found that the animals (rabbits and dogs), in a short time after receiving the poison into their stomachs,

* Vide *Treatise on Tetanus and Hydrophobia.*

became tetanic. During the spasm, I observed that the peritoneum seemed closely to invest and compress the contents of the abdomen. Upon pressing forcibly a part of this membrane between my fingers, for the purpose of detaching one portion of it, so as to relieve the supposed compression of the bowels, I was rather surprised to find the spasms totally relax, and the animal begin to breathe, as if recovering from much fatigue. The moment the peritoneum was let loose, the spasms returned with violence; and this could be repeated at pleasure.*

When reflecting upon this curious phenomenon, it appeared to me that, were it possible to afford the necessary compression of the peritoneum in the human subject, while labouring under a paroxysm of epilepsy, that the fit may be as instantaneously cut short. Opportunities were not long wanting for putting this operation into practice, and it was attended with the utmost success. The manner in which this may be accomplished, is by pressing the closed hand of an assistant forcibly on the soft part of the abdomen, towards the spine, while the patient is firmly supported on the back, with the head and shoulders raised. While this operation is performing, the practitioner will often perceive a very peculiar flapping of the diaphragm, without apparently contributing to the purposes of respiration. This I have most usually met in puerperal convulsions. When it is considered that the consequences of epilepsy are still more dreadful than the disease itself, and that the most severe of these, such as idiotism and insanity, are caused by the effects of the disease upon the cerebral structure, it cannot be doubted how important to the community at large any mode would be which could thus cut short the paroxysms, and obviate those injurious effects upon the brain.

I have endeavoured to show that the symptoms which occur during a paroxysm of epilepsy follow an invariable course, each depending on the other as cause and effect. It has also been perhaps sufficiently proved, that the immediate cause of a paroxysm of the disease should be attributed to a morbid accumulation of blood upon the nervous mass of the spine.

Having advanced so far, perhaps at some future period the observation of Celsus may be found applicable to the circumstances of this disease, when he says, "Et causæ quoque æstimatio sæpe morbum solvit."

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* It may be worthy of observation, that, after repeating the above experiment of alternately compressing and letting go the peritoneum several times, the animal at length ceased to be affected by spasm; although, upon killing it, the poison was found still remaining in the stomach and small intestines.

CRITICAL ANALYSIS

OF

ENGLISH AND FOREIGN LITERATURE

RELATIVE TO THE VARIOUS BRANCHES OF

Medical Science.

Quæ laudanda ferent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*A Practical Treatise on Diseases of the Skin, comprehending an Account of such Facts as have been recorded on these Subjects; with original Observations. The whole arranged with a View to illustrate the Constitutional Causes of these Diseases, as well as their local Characters.* By SAMUEL PLUMBE, Member of the Royal College of Surgeons of London, of the Medico-Chirurgical Society, &c. &c.—8vo. pp. 392. London: Underwood, 1824.

THIS volume bears a very close resemblance, in most of its features, to the well-known and justly celebrated work of Dr. BATEMAN. Like it, it is an octavo of above three hundred pages. It is entitled a "Practical Treatise on Diseases of the Skin," being as close a synonym of Dr. Bateman's "Practical Synopsis of Cutaneous Diseases," as the English language admits of. Like it, too, it is embellished with a frontispiece, representing the characters of the principal orders of cutaneous diseases. The designations of these diseases are, with scarcely any exception, the same as those of WILLAN; and it is plain that the one work is intended to supersede the other. The first inquiry, then, which naturally suggests itself to our minds is, what new or improved views of the subject have been taken by Mr. PLUMBE, to justify us in discarding our old guides? what alterations in theory or practice has he made? and how far has he succeeded in correcting old errors, or enlarging the bounds of prior knowledge. Dr. Bateman's work must be acknowledged by all as one of infinite merit. There are few of us who have not had opportunities of verifying the accuracy of his descriptions. For copiousness and correctness, indeed, they have long appeared to us to be unrivalled. Nay, we had even looked upon many of them as unsusceptible of improvement; and it was with no small anxiety that we turned over Mr. Plumbe's pages, to ascertain how he had contrived to give a new view of the subject, without copying from Willan and Bateman on the one hand, or sacrificing fidelity of description on the other.

It will not be considered by the public as detracting from the merits of the book, nor, we would hope, by the author as derogating from his dignity, when we say that, in this dilemma, he has chosen the right path; that he has freely acknowledged his obligations to these authors, and, in many instances, (as in pages 160, 170, 230, 238, 240, 257, 274,) copied largely and avowedly from them. In what circumstances, then, consists the difference between the rival works of Plumbe and Bateman? Is it in their views of practice? Has Mr. Plumbe discovered any new methods of combating these intractable diseases, for which we have so often (and so often in vain) turned over Dr. Bateman's pages? or is it only that he shows us our old friends in new dresses? We trust that our readers have not stretched their expectations too far, for we fear it will be found that this latter is the true answer to our question. We are far from thinking, however, that this necessarily involves a censure of the book. If Mr. Plumbe has, in his new views of an old subject, improved our notions of the relative bearings of its different parts, and given greater consistency and totality to the whole,—if he has made what was before obscure, intelligible,—if he has lopped off redundancies, and opened up the avenues which led to the obscure and hitherto inaccessible parts of the science, we, in our humble estimate of the march of human knowledge, think he has done a great deal. Now this is what we conscientiously think Mr. Plumbe has done; and we feel, therefore, as members of the profession, under obligations to him for the pains he has taken in investigating, with so much pathological acumen, the different forms of chronic cutaneous diseases, and for the skill he has displayed in their arrangement. We shall give the best proof we can of our sincerity in this acknowledgment, by appropriating an unusually large portion of our pages to the analysis of the work. We shall take the liberty of interspersing occasionally a few critical remarks; and, as we like to get the most disagreeable part of our duty over as soon as possible, we shall begin by a few comments on Mr. Plumbe's *style*. In perusing his book, we remarked, with regret, numerous instances of utter inattention to all the rules of literary composition. We do not expect fine writing in a work purely professional, but we do expect, and we think not without reason, perspicuity, precision, and, above all, correctness of grammatical construction. The following instances, selected from among several which we had noted for animadversion, will satisfy our readers (and, we venture to think, the author himself,) that the next edition will be susceptible of some improvement.

"It has been already remarked, that the pustules *are uniformly having* a hair growing in their centre." (Page 51.)—"On the other hand, however, it must be acknowledged, that we *are*

often seeing them co-existent on the same head." (P. 55.)—"Such principle is abused *at the same time as it is* partially carried into effect." (P. 54.)—"Where two *importantly different diseases* are confounded together." (P. 57.)—"Whatever may be the opinion of the profession generally as to the necessity of a more *minutely local* attention to cutaneous diseases." (P. 69.)—In page 46, in speaking of cleanliness and good nurses, we are recommended to "a diligent use of the *domestic materials* such *descriptions* of persons are accustomed to employ in washing the children's heads." The last sentence of page 62, and the second of page 45, are so much involved, as to prevent the meaning from being obvious on the first perusal. In page 35, speaking of frictions, the author says, "*a few days under its use* have disclosed pretty considerable collections of matter;" which, though intelligible, is very inelegant.—"The ring-worm of the scalp may be identified with a cutaneous disease, *commonly similarly* named." (P. 46.)

These, and various other instances which might be produced of careless and faulty writing, are real and serious drawbacks on the merit of the book. They would for ever prevent the sentences, or passages, in which they occur, from being quoted in other works; and we strongly urge the author, on this as well as on other accounts, to a careful revision of his language. It is with a view of drawing his attention to the subject, that we have made these criticisms; in the hope of seeing a good book freed, in a future edition, from blemishes so easily removed.

Mr. Plumbe commences with some remarks on the anatomy and physiology of the skin. He speaks at some length of the origin and growth of the hair; and, as he is particularly desirous of pressing this question upon the attention of his readers, we shall commence our extracts by quoting the passage.

"The cutis, therefore, a vascular and highly sensible structure, is penetrated by the hair, which does not, as far as the most minute injections, with the help of glasses, can show, receive any contribution of vessels for the purposes of nourishment from it: and if there is any analogy between the structure of the human hair and that of the larger species of animals, the oleaginous secretion covering it, and giving to it its smooth and glossy appearance, is also derived from the adipose structure alluded to beneath the cutis; this fluid being conveyed along the centre of the hair by tubes which originate in the bulb." (P. 8.)

The scalp, then, according to Mr. Plumbe, is pierced by the hair, but has little or no share in its production or nourishment. This doctrine he afterwards applies in determining the causes of that affection, which he considers the most obstinate of all cutaneous diseases, not having a constitutional origin or connexion,—viz. ringworm of the scalp.

Another point of cutaneous anatomy, which the author insists on, as calculated to explain cutaneous pathology, may also be given in his own words:—

"The cutis, on the vascular energies of which the production and nourishment of the cuticle depends, besides its more obvious and general offices as a covering to other parts, and as the structure effecting the separation of the perspirable matter from the mass of blood, gives, in different parts of the body, a seat to a most important structural arrangement, on the disorder of which some of the most obstinate cutaneous affections are found to depend,—the sebaceous follicles. These follicles are minute thimble-like depressions in the substance of the cutis. The larger kind are most numerously distributed over parts much exposed, and where flexures of the skin are formed: the secretion poured out in the former instance probably forming a defence to the cuticle, under exposure to heat; and in the latter, operating to prevent the consequences of attrition. They are most easily distinguishable about the nose and mouth in men, as well as in females; but, in the latter, they are also often seen in great numbers on the neck and upper parts of the chest: their secretion, which is entirely supplied by the vessels of the cutis, gives an agreeably smooth and glossy appearance to the skin of these parts, where their dimensions and number are not very considerable; but, where the reverse is the case, the secretion at their orifices becomes discoloured, forming so many minute black spots, which much disfigures these parts, and gives them a dingy, unhealthy appearance." (P. 3, 4.)

Mr. Plumbe is deeply impressed with the importance of distinguishing chronic cutaneous diseases, according as they are *local* or *constitutional;* and the following is the arrangement which, in conformity to his views on this point, he has adopted. He divides cutaneous diseases strictly so called, (for he, with great propriety, refuses to admit the exanthemata into his classification,) into five sections. The *first* includes such as are *local,* and obtain their distinguishing characters from local peculiarities of the skin: they are Acne, Sycosis, and some species of Porrigo. The *second* embraces those which are constitutional, the derangement of the system being of the nature of *debility*, with consequent diminished tone of the vessels of the cutis. This section includes Purpura and Scurvy, Pemphigus and Pompholyx, Ecthyma and Rupia. Mr. Plumbe comprises in his *third* division all such cutaneous diseases as are constitutional in their origin, and in their progress are characterised by active inflammation. He further states it as his opinion, that the derangement of the system producing these diseases, exists primarily and mainly in the digestive organs; and he adds, that they probably exert a salutary influence on the body. These two latter characters are evidently much too theoretical to be admitted as groundworks of a nosological arrangement. The diseases included in this order are Porrigo Favosa and Larvalis,

Strophulus, Lichen, Prurigo, Urticaria, Herpes, the Thrush, and Boils. The *fourth* section is appropriated to diseases marked by chronic inflammatory action of the vessels producing cuticle,—viz. Lepra, Psoriasis, Pityriasis, Pellagra, and Icthyosis; the constitutional causes, or influence, being here uncertain. The *fifth* and last of Mr. Plumbe's sections is made to comprise such diseases as are of a mixed character, depending essentially on active cutaneous inflammation, with which, however, (derangement of) the constitution is not, as in the diseases of the third section, *necessarily* connected. In this section the following diseases are associated together: Impetigo, Scabies, and Eczema. In a sort of Appendix, we meet with some remarks on symptomatic cutaneous inflammations of trifling importance, viz. Erythema and Roseola, on the characters of Venereal Eruptions, on Lupus, and Porrigo decalvans.

Such is Mr. Plumbe's arrangement of chronic cutaneous diseases; and we think our readers will acknowledge it to be possessed of considerable merit. We are not sure whether the different sections follow each other in a strictly natural order. It has occurred to us that, if they were transposed in the following manner—1, 4, 3, 5, 2, the succession would be much more readily understood, and the appearance of a *system* better preserved. We are, upon the whole, however, well satisfied with the author's classification; and we think it but a small compliment to him to say, that it is decidedly superior to the well-known, but most unscientific, division of Drs. Willan and Bateman.

We shall now take up in detail each of the subjects treated by Mr. Plumbe, laying stress upon those passages which appear to us interesting, either on account of the novelty or the pathological or practical importance of the opinions advanced.

Section I. *Acne.*—This disease consists essentially, in its original form, of simple obstruction to the free passage of the sebaceous matter to the surface of the skin, in consequence of which that substance accumulates and hardens. The necessary result of such accumulation, in course of time, is the distension of the follicles in which it is contained, and their consequent inflammation. Mr. Plumbe does not think, as was believed by Willan and Bateman, that such inflammation, once excited, ever terminates in resolution. Independent of the disposition to this affection which habit of living may generate, some individuals are peculiarly exposed to it from original formation of skin; and hence has arisen the idea of its hereditary character. When disorder of the digestive organs has been the immediate exciting cause of acne, the symptoms of the first affection (dyspepsia) are alleviated, and more formidable mischief some-

times prevented by its occurrence. So at least Mr. Plumbe thinks; but we are very doubtful of the correctness of this opinion. Suppuration is the most desirable course acne can take. Repellents, as they have been termed, seldom have any effect in preventing it. Frequent bathing the parts with warm water, and gentle friction with the mildest kind of soap "constitutes" (constitute) by far the best kind of local application. The notion of blistering for the removal of acne, originated with Dr. Darwin. Mr. Plumbe has no doubt of its immediate effect in stopping the disease, by clearing the mouths of the obstructed follicles; but it is a remedy unnecessarily severe, and exceedingly inconvenient. The carbonate of soda, and the oxymuriatic acid, are useless, unless coupled with attention to what Mr. Plumbe calls the local treatment *surgically*.

"The foregoing remarks apply more particularly to the states and consequences of obstruction of the sebaceous follicles, denominated acne simplex and acne punctata. When the disease occurs more extensively, and habitual disorder of the digestive organs or scrofulous diathesis exist, a slow and unhealthy suppuration takes place, spreading from the originally inflamed follicle, and involving to a considerable extent those in the neighbourhood; producing, instead of a remote pustule, a considerable, though slowly formed, collection of matter. The latter, instead of finding its way quickly to the surface, accumulates, and disorders the substance of the cutis to a great extent. Its course and extent is marked, during the more active state of the inflammation, by a florid looking and very irregularly formed, rather prominent tubercle, exceedingly tender to the touch, and in some one or two points soft: still the superincumbent skin is not ruptured, and in the course of a short time it assumes a dark-blue colour. In this state it sometimes comes under the notice of the surgeon; when, the existence of matter being ascertained, a lancet is thrust into it, and the contents discharged, leaving for some time an unhealthy livid edge to the orifice, which slowly heals, and, in most instances, leaves a mark of some duration on the part." (P. 26, 27.)

In this state of disease, the identity of which with simple acne may be satisfactorily proved, local stimulants, prior to the discharge of the matter from the tubercle, are highly improper. But, after this, a lotion, composed of five grains of corrosive muriate, dissolved in eight ounces of proof spirit, may be advantageously employed. In severe cases, mercurial ointment answers the purpose far better than any thing else. Constitutionally, a tonic plan of treatment is called for.

Sometimes the mischiefs of follicular obstruction and inflammation are confined to the tip of the nose (acne rosacea): of all deviations from health, this obtains the least commiseration. The general impression, that it depends on good living and hard drinking, is a correct one. If the same causes continue to

operate, the irregular tuberculated nose is at length formed, and follicular organization is completely destroyed. Emollient applications are here useful. Friction by means of soft brushes, assisted by soap and warm water, are decidedly beneficial.

2. *Sycosis.*—This is nothing more than acne, or follicular obstruction, occurring on parts covered by hair. It is generally true, that affections of such portions of skin as are covered with hair, are comparatively obstinate and formidable; the irritation of the hair aggravating the original disease. The pulling out of single hairs, where it can be done without pain, is often advisable; as thereby irritation is removed, and orifices are formed, by which the contents of a pustule can readily be discharged. Emollient applications are then to be trusted to; no more good being to be expected from sedative washes or stimulants, than in the treatment of the simpler forms of acne.

3. *Porrigo scutulata*, or ringworm of the scalp.—Mr. Plumbe has paid particular attention to this complaint; and we think this decidedly the best chapter in the book. We shall begin by laying before our readers a sketch of Mr. Plumbe's notions concerning the nature and varieties of porrigo. He draws a broad line of distinction between the porrigo scutulata and favosa, believing the former to be altogether a local, and the latter a constitutional, affection; differing essentially from each other in their phenomena, progress, and mode of treatment. It would certainly have been better if, with this impression so strong upon his mind, the author had applied some different term to the former disease; and, for our own parts, we are strongly inclined to think that, in this piece of pathology, Mr. Plumbe is perfectly correct. The true ringworm of the scalp, porrigo scutulata, is defined by him to be an inflammation of a specific character, affecting the solid structure of the cutis, dependent for its support on the operation of locally irritating causes; a tedious and obstinate disease, which destroys the hair; spreads by contagion; is seldom, if ever, known to terminate of its own accord, and difficult of cure, even under the most scientific management. Porrigo favosa, on the other hand, has always a constitutional origin; it frequently terminates spontaneously, and always requires the exhibition of remedies, through the medium of the constitution. Differing from each of these is that state of the scalp designated by Willan *porrigo decalvans.* Here no vestige of disease is ever discoverable in the cutis. In strict pathology, this affection is nothing more than the result of a particular structure ceasing to perform its office.

Such are the three legitimate species of porrigo. We are here to confine our attention to the porrigo scutulata. In its early stage it is called ringworm of the scalp; in the latter, scald head. Dr. Underwood, according to our author, is

incorrect in asserting that the disease commences in the roots of the hair; and Dr. WILLAN, in stating that minute straw-coloured pustules exist from the first, and are necessary to constitute the disease. Mr. Plumbe has observed that, when pustules are noticed, they are uniformly found with hairs growing through them; and, though he is not prepared to deny the possibility of the occurrence of pustules where no hairs exist, yet experience bears him out in the opinion, that they are produced by the irritation which the presence of hair in an already diseased skin is calculated to excite. The leading feature of true ring-worm of the scalp is the falling-off of the hair; and the cause of this is the excessive excitement of the cuticular vessels, which deprives the structure secreting the hair of their due nourishment. The very same principle explains the desquamation of cuticle taking place after scarlatina. In some instances, this goes on to the separation of the hair; but, if examined closely, it will not be found that the rounded, healthy bulbs are separated also: the same thing takes place in true ringworm. Hence it is, also, that, in the early stage of this affection, a scurfy state of the scalp is generally met with; the vessels secreting the cuticle performing their office with a similarly excited action.

Ringworm originates in the application of an infectious matter to a portion of the scalp, and afterwards spreads by the secretion of the pustules. This fact Mr. Plumbe considers highly important in reference to treatment; for it is clear, he says, that "all applications to the part, whether sedative or stimulant, astringent or otherwise, if they do not possess the power of taking from the matter secreted by decomposition, or other means, the power of infection, must be utterly inefficacious, if not (as many kinds of them certainly are) highly prejudicial.

Treatment of ringworm.—The first advice of the author is to remove any hair remaining on the affected portion of the scalp which may appear to come away easily, and without pain to the patient; after which the part is to be shaved. The next step, preliminary to any medical application, is to effect the discharge of as many of the pustules as possible, by pinching up the skin between the finger and thumb, and carefully washing away what is thus forced out with warm water and soap. The third step in the treatment is to employ some astringent application, possessing the power of taking from the secretion its infectious properties.

"A solution of the sulphate of copper has been employed in some cases for this purpose: I believe the object to be more completely accomplished, however, by rubbing this preparation, in a finely powdered state, on the part, and then washing it off." (P. 72, 73.)

A careful examination should be instituted every morning, and, if any pustules appear, they should be at once removed, and the sulphate of copper applied, as at first, to the part. Where the disease is severe, six weeks or two months will be required for its cure. Mr. Plumbe sets himself to oppose vigorously the sweeping anathema pronounced by Willan against depilation. Drawing out the hair does not destroy the structure secreting it; and, however barbarous the means by which it is effected, the removal of the hair is never followed by baldness. It is unnecessary to say that the author objects strongly to the pitch-cap, which, tearing off alike the sound and the unsound hair, and the scabby secretions of a tender surface, inflicts a degree of pain, from which "imagination shrinks with horror:" but from these inconveniences the use of a pair of forceps is perfectly free.

The only other peculiarity in Mr. Plumbe's treatment of ringworm, is the application, in very severe and obstinate cases, of adhesive straps and bandages. In one very obstinate case, (described page 80,) they completely succeeded; and, though the constant irritation of the newly-springing hair occasioned difficulties which were considered insurmountable, still the author had eventually the satisfaction of seeing the part completely covered with long and glossy hair.

In cases where there is no actual formation of pustule, a morbid redness of the scalp, and a production of scurf, sometimes remain. To remove this, the author recommends, in the first instance, the assiduous application of a spirituous lotion, with frequent washing of the scalp. Where it has been of long duration, a weak solution of lunar caustic is very beneficial, alternately with the former.

"In condemning the use of greasy applications of any kind, which have not the power of destroying the infections properties of the contents of the pustules, I am justified, not only by reasoning *a priori*, but by the evidence of facts; for I have frequently seen the disease spread with greater activity after such applications, than before they were made use of.

"The necessity of internal remedies in cases of simple ringworm, or that stage of the disease usually seen in the middle and higher classes, where attention to the frequent cleaning of the children's heads is observed, may with much propriety be doubted. It is certain that, in such classes, we rarely trace the slightest connexion of the disease with constitutional causes; but, under different circumstances, as in cases approaching in similarity to that last alluded to, the occurrence of severe constitutional irritation may be expected, and a feverish state of the system is rarely absent. Constitutional treatment is, of course, then directed, to subdue symptoms consequent on the irritation of the disease, and not to correct a state of the system, on which it may be supposed to depend." (P. 82, 83.)

Porrigo *furfurans* and porrigo *lupinosa* are next spoken of; and, being regarded as varieties of the P. scutulata, the same principles are applied to them.

Section II. *Purpura.*—Forty-four pages of Mr. Plumbe's work are occupied with a discussion concerning the pathology of purpura, the object of the author being to prove "that this formidable disease, whatever may have been its predisposing cause, is immediately brought about by obstruction in the hepatic circulation, and consequent impediment to the functions of the stomach and alimentary canal." In this opinion the author may be right, or he may be wrong; but we cannot understand how he makes out purpura to be a cutaneous disease, after such an avowal; more particularly as, in page 372, he refuses to admit into his arrangement certain diseases, "which obtain their chief importance from their connexion with, and dependence upon, constitutional disturbance, and the treatment of which is solely directed by the existing constitutional symptoms."

All that we shall say of the reasonings contained in this chapter is, that it has failed to convince us of the accuracy of the opinions advocated. Among other points, the author proposes the following abstruse question; and afterwards offers a solution, which appears to us by no means satisfactory.

"Is the highest degree of hepatic and general visceral congestion and obstruction in the abdomen, with which we are acquainted, capable of so impeding the functions of digestion and chylification, as to become a cause of such reduction in the nutrient properties of the blood, as to render this fluid unequal to the efficient nourishment of every part of the system? If it is, in what parts of that system would the debility consequent thereon be first manifested?" (P. 125.)

"With respect to the first of these questions, if a positive answer cannot be readily given in the affirmative, it is at least to be considered not improbable. For the second, it will occur to us, that parts already built up by the previous healthy action of vessels, and not dependent on the latter every hour for their vitality,—parts in a state of quietude and rest, are not those in which such debility would be expected first to appear. The vessels themselves in ceaseless action, and constantly under the influence of a distending power, would, reasoning on common principles, of necessity, be the first to suffer. The vasa vasorum supply the coats of the vessels themselves no better than the latter supply other parts; and these, therefore, being called on to make greater efforts in resisting the impulse of the circulation, first disclose the general deficiency by the rupture of their extremities." (P. 125, 126.)

2. *Pemphigus and Pompholyx.*—Mr. Plumbe agrees with Bateman in the non-existence of true pemphigus. Pompholyx sometimes makes its appearance as an epidemic; three recent instances of which are collected by the author, one occurring in

France, and two in England. The pemphigus infantilis of Willan wears the character of a very aggravated state of pompholyx, with great debility and low fever.

Mr. Plumbe, in his description of this disease, makes considerable use of the Memoir concerning it by Dr. STOKES, published in the 19th volume of this Journal.

3. *Ecthyma and Rupia.*—These are pustular diseases, occurring, for the most part, in young men, who, with constitutions originally not of the strongest class, imprudently indulge in excesses and irregularities to a very great extent, accompanied by privation of rest, and other depressing circumstances. Ecthyma is frequently mistaken for a venereal eruption, but mercury aggravates the disease. Measles, scarlatina, and other diseases, may become exciting causes of ecthyma. Under such circumstances, the eruption is seen, in its very earliest stage, about the waist. Rupia has been satisfactorily shown, in two cases which have fallen under the author's notice, to be only a higher grade of ecthyma; the scab becoming gradually elevated, and a broader ring of growth being added to its base every three or four days.

Anxious to do every justice to Mr. Plumbe's work, we shall take this opportunity of stating that, throughout the whole of it, he has carefully abstained from multiplying names, and subdividing diseases into species differing from each other in points of no pathological importance. The consistence, colour, and structure of scabs, says he, are only the consequences of neglect; and yet, in descriptions of cutaneous disease, they have often obtained much more consideration than the state of the skin, the accumulated secretions of which compose them. If authors, instead of describing such accidental variations, and founding upon them artificial distinctions, had taken the trouble to *clear them away*, and institute a minute examination of the skin itself, they would have been much more usefully employed. There appears to us much good sense, and a complete emancipation from scientific frippery, in this candid avowal of a disciple of Alibert and Willan.

Section III. *Porrigo Favosa.*—This is the first in Mr. Plumbe's series of diseases "which exert a probably salutary influence on the system, which are originally produced by, and usually symptomatic of, deranged digestive organs, and which are characterised by active inflammation. The author's description of porrigo favosa is taken (we believe) from Bateman. His remarks on the constitutional treatment necessary in this state of disease, are rather defective. They are in these words:

"In the management of this disease, there are few points of importance, beyond those which are comprehended in attention to the general health. The state of system under which it usually occurs, as a

spontaneous disease, will be found more frequently to indicate the necessity for depletion and alteratives, rather than tonics, which have been recommended." (P. 163.)

To make up for this, we have a very full account of the local treatment, which varies, according as the disease is situated on the scalp, or on some other part of the body. In severe cases affecting the scalp (frequently, but not quite correctly, called scalled head,) fomentations and poultices are necessary to subdue the inflammatory action of the vessels of the part; and, when this has been effected "*a little*, attention to the general health is *sometimes* all that is necessary to the cure." It must be obvious to our readers, that Mr. Plumbe does not express himself here with the same decision as when treating of his favourite subject, ringworm.

When the effusion of viscid fluid on the scalp continues obstinate, the author imagines this to depend on a morbidly relaxed state of its vessels; and an effectual application for this will be found in a solution of caustic, (a scruple to the ounce,) or of sulphate of copper, (two drachms to the ounce,) with which the abraded surface may be pencilled two or three times a-day, until the discharge ceases.

Porrigo favosa, like ringworm, spreads rapidly by contagion through families of children: separation of them, therefore, becomes a matter of prudence.

Mr. Plumbe's account of porrigo larvalis is chiefly taken from Dr. SMITH's edition of WILLAN's Works, and he gives a very complete view of the disease. It is characterised by rapid pustulation and excessive discharge. He looks upon it as a good instance of that grand and powerful remedial measure of nature—counter-irritation; the exercise of which is never more necessary than in the constitution of an over-fed infant. It is not to be confounded with those diseases identified with original debility of constitution. Its influence on the system, with reference to hydrocephalus, is a matter of serious consideration. Mr. Plumbe thinks it more than probable that, in this point of view, its beneficial effects far exceed any thing which art can supply, and that death is averted by it in numberless instances. (P. 177.) Satisfied, as we are, that a gross habit of body is tha in which crusta lactea chiefly prevails, we think the author has greatly over-rated its beneficial influence, in respect to determinations to the head. The pathology of hydrocephalus and of porrigo appear to us to be altogether different.

"It has been considered an extraordinary circumstance, that, even in the worst cases of P. larvalis, where the disease has extended over the whole scalp and face, no marks or seams of the skin should remain on the part after recovery: an attentive observation of the pathology of the disease, however, fully explains this,—as the discharge is only

poured out from the mouths of the irritated vessels on the surface, without the production of ulcerative absorption. When the cuticle is first elevated and broken by the pustule underneath, copious discharge takes place, not only on the particular point which the latter occupied, but the vessels surrounding it partake of the diseased action, and a more extensive surface of secretion is thus produced: were this not the case, the quantity of discharge would be considerably more limited." (P. 179.)

2. *Strophulus.*—We observe nothing in this chapter peculiarly deserving of note, if we except a passage in page 187, where the author favours us with his views concerning the formation of a *pimple.* "It is," says he, "produced by a minute escape of lymph from a distended vessel, and not by an enlargement of an original part of the cutis; or, in other words, of a papilla, as hitherto supposed." We doubt the accuracy of this statement.

3. *Lichen.*—Like strophulus, the milder cases of this affection may be considered indicative of pretty good general health, though it is stated now and then to occur under states of great constitutional debility, when the pimples wear an appearance in colour not much unlike petechiæ. When any accidental cause of disorder of the digestive organs, or exposure to cold, has taken place, the eruption has the characters of an exanthematous fever. The duration of the disease is very uncertain: it sometimes continues four or five weeks, without any material change in its appearance. Suddenly repelling it, is always succeeded by violent disorder of the constitution. The author fails, however, we think, in showing that lichen exerts any positively salutary influence on the system.

"From some observations which I have lately had an opportunity of making on the sulphur-vapour bath, I am induced to think it a most powerful instrument, in the hands of a judicious medical man, in the treatment of lichen, though it should not be recommended till the bowels have been some time kept open, and the system, if the patient be of a full habit, has been a little reduced. The itching and tingling during its operation is rather severe; but it is followed by a much more tranquil state of the circulation in the cutaneous vessels, and the cure is altogether materially expedited by it." (P. 196.)

4. *Prurigo.*—This affection is characterised by the violent itching of papulæ. In its external characters it resembles lichen; but, in the majority of cases, it is constituted of action of a chronic, rather than an active, character. Pimples are by no means necessary to constitute the disease called prurigo, mere itching existing only in a great number of cases. Its similarity to simple lichen justifies some doubts whether any real difference exists between them. Prurigo is, in general, partial; the generative organs and the back being the most usual of its seats. Neglect of ablution is a frequent source of it. Cleanliness and

the warm bath are the most important remedial measures, when it occurs on the superior parts of the body. Purgatives (where the strength of the constitution admits of them) should be freely used. Sulphur has no particular advantage over other medicines. The Harrogate and sulphur-vapour baths are commended. Willan's notion that prurigo is produced by a peculiar insect, is not confirmed. In cases of prurigo ani, Mr. Plumbe recommends the black wash. In very old cases, a strong solution of hydr. oxym. is advisable, until the skin acquires a blush of deep red, with heat and smarting. Pencilling with caustic is another effectual mode of removing that tormenting itching which attends the semi-organized pimples of obstinate prurigo.

5. *Urticaria.*—This chapter is full, but we do not observe any thing peculiar in it. Besides, the subject is pretty generally understood.

6. *Herpes.*—This disease, whether appearing under its regular form (H. zoster), or its irregular form (H. phlyctænodes), is materially, as well at its commencement as in its progress, unlike any other cutaneous affection; and its being confounded with eczema, impetigo, or erysipelas, could only result from great inattention. The nature and character of the constitutional causes of herpes are involved in the greatest obscurity.

"In the absence of any data regarding the manner in which disorder of vital organs can produce cutaneous eruptions, we are fully warranted in supposing, from the symptoms usually preceding herpes, and commonly disappearing after this eruption has gone through its course, that mischiefs of some importance to such organs are averted by it: in short, that it exerts all the influence, and is entitled to the estimation of, a natural counter-irritant. In this character it has, in two or three instances, in delicate females, within my own observation, checked the progress of symptoms, which had given rise to great anxiety respecting the state of the thoracic viscera." (P. 249.)

The following is a good specimen of Mr. Plumbe's talent at pathological research.

"The grand distinguishing feature of herpes, namely, the limited size of the vesicles, seems to depend on the cuticle being bound down to the cutis by the adhesive inflammation, during that state of the vessels of the skin, marked by great heat and redness, which precedes actual effusion of serum. Thus, when effusion takes place, it does not elevate the cuticle generally and extensively, as in erysipelas or pompholyx, but only on the precise spot occupied by the mouths of the vessels, from which the fluid escapes. Hence the pearl-like elevated form of the vesicle, and the obviously thinned and distended state of the cuticle forming its parietes." (P. 254.)

Mr. Plumbe next enters on the consideration of the local varieties of herpes, and is full upon the causes and diagnosis of

H. præputialis. We pass over this, however, as not strictly belonging to the consideration of cutaneous diseases.

7. *Aphtha, or Thrush.*—The author distrusts the general opinion, that this disease is vesicular. He has never been able to see it in the form of distinct vesicles, and he is disposed to consider it as more nearly allied in its nature to strophulus. Pimples of strophulus are often, nay generally, visible on the skin of other parts where the thrush makes its appearance. When a child affected by thrush produces disease in the nipple of its nurse, it is absurd to think of changing the nurse. The better plan is to wean the child at once. If the existence of thrush be known sufficiently early, the application of warm water to the nipple after each suckling, would effectually prevent disease appearing in it. When it has taken place, quietude of the part, with a weak saturnine spirituous lotion, will quickly heal it.

The aphtha of adults is a distinctly vesicular disease. It always occurs in low and debilitated states of the system, and is nearly allied to purpura. By the way, we do not exactly understand how the author reconciles the opinions stated at the top of page 273, with what he says at the bottom of page 124.

8. The last in the series of constitutional inflammatory cutaneous diseases, is *furunculus*, or *boil.* There are two species of this affection: the first involving the cutis and cellular tissue beneath it, and often to so great an extent as to conceal the circumstance of its cutaneous origin; the second, vulgarly termed the *blind boil*, is strictly confined to the substance of the cutis. The former usually occupies the arms, thighs, and nates; the latter occurs chiefly on the abdomen, and trunk generally. The same causes produce the two species; there are no pathological differences between them. Young persons of full plethoric habits, enjoying good health and good living, are most subject to them. The author does not speak, from his own experience, of the value of any particular line of treatment in this furuncular diathesis.

Section IV.—Diseases marked by chronic inflammation of the vessels secreting the cuticle; constitutional causes or influence uncertain.

1. *Lepra.*—The pathological features of this disease are sufficiently distinct and defined, but they unfortunately lead to no practical inferences. The author is unable to throw any light on its causes, (or if, with our author, we must use a hard word where a plain one would answer every purpose,) on its *etiology.* Leprous affections are frequently observed in young females in highly respectable circumstances in life, and prove exceedingly unmanageable. "In the majority of such instances," says the author, "an hereditary origin is, I believe, easily ascertained."

Deficient energy in the vessels of the skin, and consequent inadequacy to the production of healthy cuticle, may, he thinks, be fairly presumed to exist in this disease. Tonic medicines, however, with the exception of hydr. oxym., do not seem to be possessed of much power.

2. *Psoriasis.*—We observe nothing in this chapter to remark upon as new or valuable, if we except the detail of a very interesting case, treated at Mr. GREEN's establishment for sulphur-vapour baths, in Bury-street. We have understood, however, from Mr. Green, who likewise is a scientific man, that he was rather disposed to regard the case as an instance of very severe impetigo. A complete recovery followed the use of the sulphureous fumigations, which were employed daily for seven weeks. The arsenical solution, and the sulphur-vapour bath, promise to become instruments of pretty uniform power in the cure of leprous affections. Speaking of the efficacy of ablution and friction, the author, in page 307, thus expresses himself:—"There are opinions on record, indeed, that these measures deserve the consideration of certain remedies in many cutaneous diseases." We have attempted in vain to discover the true meaning of this passage: we apprehend there is some mistake in it.

3. *Pityriasis.*—Scurfy exfoliation indicates debilitated action of the vessels secreting the cuticle. The causes of this debility are primarily constitutional, when bark, good living, and cold sea-bathing, are indicated. Where local debility remains, a strong spirit lotion, holding some acetate of zinc in solution, is very serviceable. Neglect of this complaint sometimes lays the foundation of confirmed porrigo.

4. *Pellagra.*—Mr. Plumbe's account of this disease is abstracted from Dr. HOLLAND's paper in the Medico-Chirurgical Transactions.

5. *Icthyosis.*—In several cases of this deformity, hereditary origin has been distinctly traced. The combined influence of pressure, applied by means of adhesive straps, and of cold lotions, effected a cure in two instances which fell under the author's notice.

Section V.—Diseases of a mixed character.

1. *Impetigo.*—This disease, in different cases and different stages, exhibits vesicles, pustules, and regularly-formed scales. The grand and predominant features of it are extreme irritation and inflammatory action, extensive pustulation, and scabbing; it is succeeded by a proportionate degree of relaxation of the vessels of the part involved. The author is inclined to think that, in by far the larger portion of cases, it may be referred to local causes; but he acknowledges that it is sometimes preceded by disorder of the whole system, and even that an hereditary

predisposition to it exists. In the treatment of impetigo, Mr. Plumbe commends, as indispensable, frequent ablutions, which, with some simple alteratives, and the rejection of all ointments, will often subdue it. He speaks with much confidence of the value of a lotion, consisting of three drachms of hydrocyanic acid, seven ounces and a half of distilled water, and half an ounce of spirit of wine. The sulphur-vapour bath also comes in for its share of praise.

2. *Scabies.*—"It is now pretty well understood that itch is a disorder of the skin, entirely dependent on the habits and operations of an insect, to which Providence has allotted this part of the body for occupation and subsistence." Dr. GALES, physician of the Hospital St. Louis, at Paris, has succeeded repeatedly in producing the disease, by confining the insect in his own skin. The author prefers sulphureous fumigations to every other mode of exhibiting that useful, but unfashionable, remedy. At least, we judge so from the manner in which he speaks of it.

"Dr. Horn, of Berlin, and Dr. De Carro, of Vienna, appear to have been next to Dr. Gales in the use of the bath. Subsequently to these, Mr. Wallace, of Dublin, has published his observations; and step by step, by the joint improvements or suggestions of the observers, the instrument, from having been inconvenient and uncomfortable to the patient, is now become not only an important and decided remedy of great value in many cutaneous diseases, but an absolute luxury as regards the patient's feelings." (P. 357.)

3. *Eczema.*—This form of cutaneous disease is characterised by a diffused eruption of vesicles, without inflammatory bases. It has for its local causes the direct rays of the sun, and for its constitutional causes the irritation of mercury in habits peculiarly predisposed.

We do not observe any thing in this chapter, more than we were familiar with from the works of Bateman and others; and we shall, therefore, here take our leave of Mr. Plumbe.

We trust he will pardon us for the liberty we have taken, in the discharge of our critical duties (as we venture to term them), of animadverting upon those parts of his work which appear to us to detract from its merit. We have said enough, we think, to satisfy our readers, that it is a good book, and worthy of a place in their libraries. It does credit to the author's industry and talent; and we can conscientiously say, we have derived much instruction and pleasure from the task, which we have now brought to a conclusion.

ART. II.—*A Practical Treatise on Hæmorrhoids, or Piles, Strictures, and other important Diseases of the Rectum and Anus: being, with some Additions, a Treatise, to which the Jacksonian Prize was adjudged by the Royal College of Surgeons.* By GEORGE CALVERT, Member of the Royal College of Surgeons in London, and of the Medico-Chirurgical Society, &c.—8vo. pp. 359. London: Callow and Wilson. 1824.

No branch of surgery has been cultivated with more success, within the last few years, than diseases of the rectum and anus; and yet, in this investigation, the advantage gained bears but a small proportion to the number of Treatises written, and the many labourers who have appeared in the field. It unfortunately happens in our profession, that the majority of books are written by the young, and read by the old, practitioners; which is exactly the reverse of what might be expected and desired: hence the same materials are perpetually employed and misapplied, which the more experienced workman would reject as useless; and thus, though he would render his work less bulky, it would be more solid and lasting. To speak more plainly, we deprecate the publication of Jacksonian prizes generally, as prize Essays. They may be very creditable to the talents of the young aspirant; they may display great anatomical knowledge, extensive reading, and intellectual acumen; but they must be deficient in the essential point of *experience*. In detailing the conflicting and opposite opinions of authors of celebrity, they cannot be expected to place any disputed point of practice upon a firmer basis; and, therefore, although amply deserving of the reward they solicit, they can add nothing to our actual knowledge, and do not contribute to the progress of the science in any degree: nay, they do worse; for they too often actually unsettle and throw a doubt over points that were previously pretty well established.

In prefixing these remarks to our account of Mr. CALVERT's work, we intend no disrespect to him: indeed, we have rather been anxious to give our honest opinion upon the present occasion. His Treatise is more practical than prize Essays are usually found to be, and therefore less exposed to the objections we have urged above: nevertheless, his book is of a very formidable length, the principal part of it being made up of the reasonings and opinions of the most eminent authors, both English and foreign; whilst the really practical part lies in a comparatively narrow compass, affording, in this respect, a striking contrast to the little Treatise of Mr. COPELAND, which, in the space of a few pages, contains a mass of important matter; and to the more recent publication of Mr. WHITE, which, independently of the cases, occupies only eighty-four or eighty-

five pages. We are aware that this is no fault of Mr. Calvert's; that the very nature of a prize Essay renders it necessary for the candidate to display all his reasoning, and to bring out all his elementary knowledge: and this brings us back again to the objection we previously made as to the publication of such works. It is, however, but justice to our author to say, that he has throughout evinced an intimate acquaintance with anatomy, a very extensive knowledge of books, and considerable literary attainments.

A book upon Hemorrhoids is sure to attract attention: the disease is of such common occurrence; the distress and inconvenience produced by it are so incessant, so lasting, and so constantly liable to aggravation from year to year; and the reluctance which the patient feels to communicate his sufferings, from the situation of the complaint, altogether render such publications much sought for, and consequently popular. It is the more necessary, therefore, that correct notions be entertained of the nature of the complaint, and some positive conclusions deduced as to the best mode of treating it.

In the first part of this inquiry, we think Mr. Calvert has been very happy in his recommendation of curative means: if he has not discriminated so well as we think might have been done, he has, at least, omitted nothing that has been said or recommended by authors in general. Our author commences by an account of the origin and general character of hemorrhoids, and then goes on to describe the more common forms of these tumors, which he distinguishes, very justly, from the mere varicose condition of the hemorrhoidal veins; a disease comparatively rare, and which is not often, when it exists, the subject of much uneasiness to the patient, unless combined (as it very often is) with the common hemorrhoidal tumor. An accurate description of the formation and growth of these tumors is then given. We need scarcely say that our author disproves the notion formerly entertained, that they were mere dilatations of the veins. He describes the bleedings that sometimes take place from their surface; but he does not, we conceive, dwell strongly enough upon the occasional severity and extent of these bleedings, and which constitute a very principal argument for the performance of the operation by ligature, in preference to incision, under certain circumstances. We have seen more than once, bleeding take place from a vessel of very formidable size, and to an amount which, if frequently repeated and long continued, would have endangered the patient's safety. It is likewise well known that, in more than one recent instance, after the excision of the tumor has been performed, death from hemorrhage has ensued.

We shall here beg leave to quote the description of these tumors, as given by M. De Larroque :—

"If we divide one of these tubercles in the centre, we find a homogeneous parenchyma, very often of a reddish colour, but which sometimes becomes rather white when it is washed in water, and particularly when macerated. If, previous to washing it, we press the tissue, pure bloody serum, or else a very limpid serous fluid, is forced out, as from a sponge.

"It should be remarked that, even in cases where there are varicose veins, this cellular parenchyma is never wanting; so true it is, that to its development the formation of hemorrhoidal tumors must be attributed. In general, wherever veins are discovered, they are placed between the exterior and this organized tissue, and are lost in very minute ramifications. This general disposition of the veins is an additional proof that these hemorrhoidal tumors do not proceed from varices; for in that case they would be found distributed in the body of the tumors, and not upon their surface." (P. 33.)

Our author adds, that the great difference in the appearance of these tumors in the living and dead subject, must not be forgotten: in the latter instance, they are found more or less collapsed, and the veins, which prior to death constituted but a small part of the swelling, are, both by their colour and size, the first objects that arrest the attention. The whole of this section is well written, and deserves the perusal of the young practitioner.

We pass over the sixth and seventh sections, which treat of hemorrhoidal varices, and the effects of inflammation of the common tumor, or piles, as they are usually called, since they contain nothing but what is generally known and admitted as true. With regard to the causes of this disease, more difference of opinion has been entertained. All the common opinions upon this point are respectively detailed by our author; and here we observe that, though he is intimately acquainted with all the authorities of the case, he is not prepared with any decided opinions of his own, as to whether the male or female is most subject to the disease; whether it be owing to hereditary predisposition, to climate, improper diet, or, lastly, to an habitually costive state of the body: and we conceive he is particularly unfortunate in deciding against this latter condition as exciting cause, since we have ever found it the most active and foremost amongst them. This condition of the system induces long sitting at the water-closet, perpetual strainings to evacuate the contents of the rectum, and, if long continued, is invariably followed by an increase of the symptoms. Those who, from circumstances or situation, are frequently obliged to postpone the discharge of the fæces, are also liable to attacks of piles;

and the disease, when once formed, undoubtedly has a tendency to increase progressively. In middle life it is extremely common, both with males and females; though, if we were to decide by the result of our own experience, we should say that the hemorrhoidal tumors are most frequent in females who have been married, and borne large families; but that, *cæteris paribus*, they cause more uneasiness and distress when they affect the male sex, to which, in all probability, habits of life, more active employment, and in some measure the structure of the parts, may contribute. Many of the minor causes mentioned by our author, no doubt, also have a share in the formation of this disease: indeed, it appears to us to be one of those complaints in which numerous causes are generally combining, in the same individual, to the development of the symptoms.

In the ninth section, Mr. Calvert discusses the general treatment of hemorrhoidal tumors, commencing with some remarks on the notion formerly entertained, that this disease was in some respects salutary, and that to check it was a practice fraught with danger. Our author seems not quite to have made up his mind as to what degree of credit may be due to these often-repeated assertions; and he quotes a case from Mr. Howship, and mentions one which we suppose came under his own cognizance, of serious disease following the suppression of the discharge from these tumors. In Mr. Howship's case, death followed, from gout in the stomach, in three days. The other case does not appear to have been fatal. Such events are, however, rare, and, in guiding us in practice, can have little or no influence; since, when these tumors have acquired a great size, and are consequently interfering completely with the comfort of our patient's life, we do not hesitate to recommend their removal; and since, in an hundred such instances, the health will be found to be restored by the operation, our apprehensions of the ill consequences resulting from the cure or removal of the complaint in less severe cases, must amount to but a trifle indeed. Nevertheless, if there be decided gout in the habit, it may be well to take that circumstance into consideration; since the most trifling operation, the sudden application of cold, or any minor cause, may, in some constitutions, produce a fatal result; but we do not believe it to be peculiar to the treatment of piles.

We quote the following sensible directions for the management of the common attacks of piles, with great pleasure:—

"As the disposition to hemorrhoids, when promoted by circumstances, often continues for life, and the paroxysms are liable to be increased in number, or aggravated by numerous and very trifling causes, it becomes a heavy tax and inconvenience for the patient to have recourse,

on every exigency, to medical opinion. For these reasons, it is in some degree incumbent on the practitioner to furnish his patient with such general rules as may tend to lessen the predisposition, and moderate the violence of the attacks, without risk. These should relate to the ordinary actions of the day, to diet, the state of the bowels, the circumstances under which topical applications are most useful, &c. &c.

"Attention to diet is the first and most important consideration in many cases; and, if the patient is not advanced in years, enjoys a moderate state of health, and will submit to what is thought requisite, I will venture to say that he may pretty confidently expect a perfect cure, with little foreign assistance.

* * *

"It is not possible to give general directions respecting diet, that are applicable to every case, as much will depend upon peculiarity of constitution, the state of the general health, &c.; but, in general, that which consists of a mixture of animal and vegetable food, which contains sufficient nutriment in a moderate compass, is easily digested, and not too stimulating, is the best. In this respect, the patient must have recourse to that which he has found by experience to agree with him, and which, if possible, without the aid of medicine, will maintain the bowels in a state of proper action. Milk has been recommended, and where it agrees it certainly forms an excellent diet; but it is apt to confine the bowels, and form very hardened fæces, and the necessity, in such cases, of giving laxatives must counterbalance the virtues it may possess. I am at present, however, acquainted with an elderly lady, who for many years has suffered from hemorrhoids, and an excessively torpid state of the bowels, and in whom milk acts as a purgative. She is in the habit of taking a glassful, warm from the cow, every second morning, and prefers it to purgative medicines, as its operation is sufficiently powerful, without being accompanied with any griping pain or nausea.

* * *

"Those who suffer from hemorrhoidal diseases are often in the habit of taking purgatives, either to obviate costiveness, or to lessen the heat of the body, as it is vulgarly termed. No habit, however, can be more pernicious, particularly when these are of the resinous kind, which is generally the case, as they are more readily formed into pills. By purging, the contents of the bowels, being expelled before they have undergone the natural change, act upon the mucous membrane of the large intestines, like many foreign substances, to whose mode of excitement it is not habituated. At the anus, where there is more animal sensibility, this irritation is shown in the burning sensation that accompanies the expulsion of the fæces under such circumstances, and sometimes produces a degree of tenderness almost amounting to excoriation.

"Another habit, which is also very pernicious to those who are affected with hemorrhoids, is that of continually taking hot liquids. These gradually relax the vigorous tone of the stomach and bowels, render the whole system much more sensitive, and therefore more liable to be acted upon by change of temperature, and many other causes to which we are constantly exposed. They should, therefore, be taken very

sparingly; and, where the previous habits of the patient have not rendered this temporary stimulus in some degree necessary, and the circumstances of the case may require a particular attention, it is much better that they should be altogether withdrawn. I have had repeated opportunities of witnessing the good effects of a moderated diet and cool drinks; but those who have been accustomed to take large quantities of hot tea, coffee, &c., and depend upon them for that pleasurable state of mind which is natural to some without their influence, can seldom be prevailed upon to forego their use.

"What I have said respecting hot liquids refers also to the frequent use of hot stimulating injections; a practice which is less necessary to notice, because it is not common in this country. The same objections, however, do not obtain to cold washes and injections, which, if used with prudence, are always of the greatest service whenever hemorrhoidal diseases are not owing to a torpid state of the circulation. Indeed, injections of cold water have been so strongly recommended by Schmucker and some other celebrated continental writers, that they are now in pretty general use." (P. 73—80.)

As a remedy for obviating the costive state of the body, our author praises the supertartrite of potash combined with sulphur; and attributes, with great propriety, the benefit derived from Ward's paste, cubebs, or other stimulating remedies, to their employment in those cases of long standing proceeding from debility, or a sluggish state of the circulation.

This section concludes with directions for our conduct when the sudden suppression of an attack of piles is succeeded by severe constitutional symptoms.

The local treatment of hemorrhoidal tumors, which in fact comprises their radical cure, resolves itself into three modes,—the application of medicinal substances, compression, or finally their removal with the knife or ligature. To fulfil the first intention, the assiduous employment of lotions and ointments is recommended; and, where the tumor is either single or small, and so situated as to be within the reach of these applications, we have known the decoction of oak-bark especially productive of the greatest good. Our author says, that these washes are more efficacious if combined with pressure,—which we admit; but we have not found that patients in general are inclined to submit to this inconvenience in cases where the tumors are not, from their size or number, a perpetual source of uneasiness; and then the more active measure of removing them alone holds out a prospect of affording permanent relief. When the tumor is more internal, the use of the rectum bougie will frequently be productive of great benefit. All these measures, however, are adapted to the treatment of piles in their quiescent state: when, from some accidental circumstances, they become inflamed, they then must be treated according to the common

principles of surgery. Rest, in the horizontal posture, is necessary; local bleeding we have always found to afford great relief; and, from experience, we are inclined greatly to prefer warm fomentations upon such occasions. Our author, however, recommends cold injections; though he admits that, from the tenderness of the parts, injections cannot often be had recourse to, without causing great pain. We again repeat, that warm water, or the poppy fomentation, will, in this condition of the parts, be most acceptable to the patient's feelings.

Mr. Calvert discusses at some length the propriety of applying leeches to piles under these circumstances, and notices the strong opposition made to this proposal by RICHTER and other eminent men: he seems himself not to be decided upon this point. For our own parts, we have done it so often ourselves, and with such decided advantage, that we have no hesitation in recommending it; and upon what principle it can be objected to, we are at a loss to conceive.

Our author remarks that, when the tumors cannot be returned, they very often swell and become livid; and, in fact, are destroyed in the same manner as if a ligature had been applied.

Very few words will suffice upon the subject of compression as a curative means in this class of diseases: however plausible it may appear in theory, it is scarcely practicable. Compression must be employed for a long time before any permanent good can be expected from it. It is incompatible with the usual avocations and pleasures of mankind, and therefore never will be submitted to in the majority of instances; it is also uncertain, to say the best of it, in its effects.

We therefore proceed to discuss the propriety of removing these tumors, by the knife or ligature. If we look at the conflicting opinions of eminent authors, both English and foreign, ancient and modern, we shall be able from them to form no conclusion whatever, as to the preference to be given to one mode of operating rather than another in these cases. Each has some melancholy story to tell of death from ligature or hemorrhage, as they happen to advocate one or other method: but the whole secret lies in a very narrow compass, and the line of distinction is well defined and certain. Whenever the hemorrhoidal tumor is so situated that *skin* is involved in its removal, the ligature should never be resorted to: it is in those instances that the alarming and fatal symptoms noticed by authors occur, and as, in such cases, the fear of hemorrhage cannot operate, there can be no objection to the use of the knife. Where, however, the disease is situated fairly within the rectum, and the tumors are merely covered by the mucous membrane of the gut, the ligature is the safest, indeed the only safe, method of removing them; for we have seen and known them to bleed in a very

alarming manner when removed by the knife; they escape out of our reach, and we have no certain method of commanding the hemorrhage: whereas, when the ligature is employed, it is true that the pain is often great,—that the bladder sometimes sympathises with the rectum, so as to produce partial retention of urine, requiring the employment of the catheter, perhaps, for a day or two; and, more rarely, the stomach feels the impression of the operation, and there is nausea and sickness; but the pulse is rarely affected. The symptoms to be dreaded are *not those of inflammation*,—they are to be commanded by the free exhibition of opium; and we agree entirely with Mr. HOWSHIP, in believing that, in consequence of the action of the ligature, the parts previously relaxed become more firmly consolidated. The only precaution necessary to be taken in these cases is to evacuate the bowels well previously, to keep the patient in bed, to calm pain by the use of opium, and to prevent the parts being used for three or four days, if possible. If the tumors to be removed are large, it is best to pass a needle, armed with a double ligature, through the base, and to tie it on each side. If the attachment of the tumor be small, a single ligature will be sufficient. They should in both cases be drawn sufficiently tight.

We refer to Mr. Calvert's work, for a description of either mode of operating; but we are quite sure that the distinction we have made above is both a just and a safe one.

We have now arrived at the second division of Mr. Calvert's work, on *Stricture of the Rectum*, a complaint which is undoubtedly more common than it was formerly believed to be, but which has become, perhaps, too fashionable in some parts of the kingdom; since we have heard that all diseases are, in a certain quarter, referred without hesitation to this source. We must take this opportunity of saying, that we consider Mr. WHITE's little work upon this disease as a very valuable addition to our stock of knowledge; and that we have only been prevented from noticing the second edition by a pressure of other matter.

To return to the work before us: we consider the chapter on Strictures of the Rectum as well drawn up, containing all the facts materially necessary to be known; and the practical instructions are also well detailed. It must be recollected, that both prolapsus ani and hemorrhoidal tumors may originate from a strictured state of the rectum; and that it is, therefore, necessary to make accurate inquiries into the symptoms in all such cases; and, if any doubt exists, to examine the part with a bougie. We extract from our author the following method of making this examination:—

"Whenever the symptoms lead to a suspicion that there is a contraction in some part of the rectum, it is absolutely necessary, in the first place, to ascertain if this be really the case, as well as its nature, if possible, situation, extent, &c. This can only be done by a scientific and careful examination of the gut; which is the more requisite, because nearly the same train of symptoms may proceed from a variety of causes, which will be afterwards noticed; and if purgatives be exhibited, or the bougie employed, without this precaution, the patient may be exposed to considerable risk, and the cause of his sufferings increased instead of remedied, by the means that are carelessly adopted for its removal. For this purpose, the rectum being cleared out by a common clyster, and the patient placed upon his side, or (what is better) resting upon his knees and elbows, the finger of the surgeon should be smeared with common cerate, and carefully introduced within the gut. If no contraction be discovered, it may be presumed that one exists higher up; and a common plaster-bougie, rendered somewhat pliant by warmth, and slightly bent near the end, so as to accord, in some degree, with the natural curvature of the passage, must be anointed in a similar manner, and gradually passed onwards, if no obstacle intervene, within the sigmoid flexure of the colon. This operation requires some caution and judgment on the part of the surgeon; for, if it is not performed with delicacy, the parietes of the gut may possibly be injured, or, the upper axis of the pelvis being overlooked, the point of the bougie may be directed against the projecting part of the sacrum, and give rise to the idea of a stricture, when none in reality exists. At the same time, also, it is useful to bear in mind, that a similar mistake may possibly occur when the upper part of the gut, being distended with fæces, is forced down, and in some degree turned upon itself; or the cavity may be almost obliterated by the pressure of tumors, as in cases of enlarged ovaria, retroversion of the uterus, &c." (P. 165—167.)

"With reference to the length of time the bougie should be allowed to remain within the rectum, it must be regulated solely by the feelings of the patient, or rather by the manner in which the act of dilating the stricture may affect the constitution; for he may suffer severely from this cause, without being at all aware that his symptoms can be attributed to it. If the pressure of the bougie, although moderate, cause considerable pain in the situation of the stricture, extending to the groins, the thighs, or other parts; or if, after the bougie is withdrawn, general uneasiness, tremors, and sickness come on, we may conclude that, in the present state of the patient at least, it will do more harm than good; and the common tent, or the dilated gut, should be substituted. As these symptoms, however, may proceed from violence in using the bougie, in cases where, if judiciously employed, it might be of essential service, it should not be discontinued, when found to disagree, without first trying one of a smaller size, and taking care to introduce it with delicacy and judgment. Indeed, in employing pressure in any form for the cure of strictures of the rectum, it should always be recollected that the disease is in general produced and kept up by local irritation, and that violence of any kind is more likely to increase than

remedy the evil. The surgeon should, therefore, be supplied with a number of bougies of different sizes and consistence; and the first that is used should be just large enough to produce a very moderate degree of distention. This may be withdrawn after remaining a few minutes, if it produce much pain or uneasiness; the time being gradually increased afterwards, as the part becomes habituated to the pressure. The size of the instrument must also be gradually increased, in proportion as the stricture is distended, until at last one of the largest diameter can be introduced, and retained with ease." (P. 177—179.)

This division of our author's work also contains directions for the treatment of the cancerous stricture, as well as for other varieties of the common stricture, and which require occasionally the use of the knife; but want of space obliges us to pass hastily over the remaining portion of this chapter, simply remarking, that it is very creditable to Mr. Calvert's talents, and well deserving perusal.

The third chapter, on *morbid contraction of the anus*, leads our author, after the detail of a severe case of this kind, to notice, and to doubt, the opinion advanced by Delpech, and other foreign writers, of the occasional venereal origin of this complaint. If mercury, either locally or generally applied, be useful in these cases, it is scarcely warrantable, merely on that account, to decide upon it as a symptom of syphilis; added to which, mercury alone, without the employment of other means, will not be found to effect a cure.

In the history of the spasmodic contraction of the anus, arising frequently from fissures within the gut, our author gives us the result of M. Boyer's opinions and practice, as detailed by Mr. White, and in some of the late periodical publications; but he seems to doubt whether the operation recommended by that gentleman is so often called for, or so often likely to be successful, as it was found to be in M. Boyer's hands. We shall give his reasons in his own words:—

"In the first place, the necessity in the operation of including the fissure in the division seems to imply, either that the contraction is consequent to the fissure, or that the violent paroxysms of pain are produced solely by the efforts to dilate the sphincters, when morbidly contracted; an opinion that arises from the circumstances of the pain following the evacuation of the fæces. In some cases, however, the paroxysms of pain and contraction occur periodically; and in others, the sufferings of the patient are much less violent, but more continued, particularly when the complaint proceeds from sympathy with other parts; yet both these cases may exist without the presence of fissure.

"From this view of the complaint, it would appear that the distention of the anus, in evacuating the fæces, is amongst the number of those causes that aggravate the morbid sensibility already existent in the sphincter muscles; and that, in dividing these, we merely contribute to

the cure in removing one accidental source of irritation, whilst the disposition to the complaint, and other causes by which it has been produced, or at least is kept up, still remain.

"Although this form of contracted anus is often connected with fissures, yet, as it sometimes exists separately, it is evident that these, when present, cannot, with any degree of certainty, be considered as the cause, and that we cannot conclude the complaint will disappear, if these are cured. In cases of piles, excrescences, and other affections of the anus, connected with thickening and disordered state of the internal membrane, fissures are very common; owing, I conceive, to the greater disposition to the cracking and excoriation of this part in passing hardened fæces, and the difficulty with which cicatrization is effected, where the adjacent parts are liable to frequent motion: and we may, therefore, expect to find them, with much more reason, whenever the sphincters (as in the present lamentable complaint) are so rigidly contracted, that the inner membrane of the anus must necessarily become thickened, and often excoriated, from a similar cause. Still, however, they may have existed previously, and have given rise, either separately or in conjunction with other causes of irritation, to this painful affection of the sphincter muscles; and whenever, therefore, from the urgency of the symptoms, the operation is determined upon, the instrument should always be carried through the principal fissure, unless it is situate at the anterior part of the anus; for, even admitting that it is a secondary affection, still, as the constant irritation it must necessarily produce may tend to increase the original complaint, the operation, if unsuccessful, would not be wholly useless." (P. 228—230.)

He suggests also, theoretically, (for he has had no opportunity of trying it in practice,) that, as this complaint usually occurs in persons of a weak and irritable habit of body, it may sometimes be considered as a species of tic douloureux; and that, therefore, when the digestive organs are in some degree restored to a healthy action, the sulphate of quina, or carbonate of iron, may be useful.

We shall pass entirely over the fourth chapter, on *prolapsus ani*, and its mode of treatment; since, although it contains much matter, there is nothing that requires comment or criticism. It gives a full and fair account of the complaint.

Of *fistula in ano*, and the treatment of *abscesses near the anus*, our author gives an extended account; but which the small portion of room that we can afford to bestow upon the subject, obliges us merely to notice. Mr. Calvert teaches us how much may sometimes be achieved by proper management of these abscesses. He warns us not to be too hasty in our use of the knife in recent cases; and he very properly cautions us against interfering too hastily with those fistulæ evidently connected with a disordered state of the constitution. In these instances it will, of course, be more likely to succeed, if the original dis-

order be removed, or even palliated. He then proceeds to describe two modes of performing the operation, by the knife and by the ligature. In the former case, our author avails himself of the judicious remarks of Dr. RIBES, and adds this important advice:

"In performing the operation for fistula in ano, no pains should ever be spared in endeavouring to discover the internal aperture. This, by some surgeons, is not considered of much importance; but, having seen the operation fail from neglect of this kind in two or three instances, I am inclined to think otherwise. The sinus, it is true, will heal to the whole extent; but a small aperture, from which a little matter continues to exude, remains within the gut: and, as this is prevented from healing with facility, in consequence of the motion of these parts, and of the irritation of the moisture that oozes from the fæces, another sinus may form, requiring the operation to be repeated. For this reason, I think it advisable to discover the internal aperture, and, when the sinus happens to extend still higher, that it should, if possible, be included in the division." (P. 311.)

We shall not add any account of the mode of operating by the ligature. Our author does not altogether condemn it; at least, he seems to think it may occasionally be warrantable. We hardly think so, but are not willing to enter into a controversy upon this point; since, indeed, Mr. Calvert himself does not insist very strongly upon it.

A short chapter on *ulcers of the rectum*, and another on *excrescences about the anus*, conclude the volume. Concerning these, little need be said: their causes and mode of treatment are pretty well understood, and fortunately in this country we have not often to deal with those of a specific nature, excepting—But the subject is invidious and disgusting, and therefore we will omit even the exception.

We must now draw to a close. We take our leave of Mr. Calvert, by thanking him for the pleasure we have derived from the perusal of his work. We have not concealed our honest opinion, that it is too long, too much crowded with quotation, and occasionally not definite enough in its practical directions; but yet it contains undoubted evidence of his industry, his literary attainments, and his professional zeal.

DIVISION II.

FOREIGN.

ART. III.—*De Medulla Spinali Nervisque ex ea produentibus Annotationes Anatomico-Physiologiæ.* Auctore CAROLO FRANCISCO BELLINGERI, Regiæ Scientiarum Academiæ et Collegii Medici Taurinensis Membro, Imp. et Reg. Scientiarum, Litterarum, et Artium Academiæ Batavinæ Sodali, Regiæ domus Medico.—Augustæ Taurinorum ex Tygographia Regia. 1823.

Anatomical and Physiological Remarks on the Spinal Marrow, and the Nerves arising therefrom. By CHARLES FRANCIS BELLINGERI, &c. &c.

So general an attention has recently been excited, both at home and abroad, towards the anatomy and functions of the nervous system, that no apology can be necessary for renewing the subject; particularly as we have made it our business to lay before our readers the earliest information of every novelty on this subject, and as this Journal has been the medium of several highly interesting and important original communications.* The work before us relates more especially to the spinal marrow, a portion of the human frame, which, although possessed of the highest physiological interest, has, from its peculiar situation, been less examined than other parts; the care with which nature has guarded it from injury, rendering it at the same time less easily exposed for the purpose of anatomical scrutiny. Accordingly, there are few parts, the descriptions of which have differed more essentially, with respect to circumstances about which no discrepancies could, *a priori*, have been anticipated: thus, in speaking of the distribution of the grey matter in the centre of the white, LIEUTAUD says that it has a form of two half-moons; WINSLOW compares it to a horse-shoe; HUBER to the os hyoides; MONRO says it resembles a cross; HALLER a double cross *(quadricruris)*; while others, particularly GALL and M. BELLINGERI, differ in their account of it from all these.

The last mentioned is the writer now before us, who informs us that he has for some time directed his investigations towards the spinal marrow, and paid particular attention to the relative distribution of the white and grey substances. In doing this, he followed the method recommended by RACCHETTI, of hardening the cord by means of nitric acid, much diluted with water; or, what answers still better, the fuming nitrous acid, although, in using this, considerable care is required not to employ the acid in too large proportion, lest it stain the whole yellow, so that

* See various papers on the Nerves, by Mr. SHAW and Mr. BROUGHTON, published during the last two years.

the different structures cannot be distinguished from each other. The water, we are informed, is sufficiently acidulated when it communicates a distinctly sour taste to the tongue. Thus prepared, it may be kept for months or years, and its structure clearly demonstrated; but, if it be cut across in its recent state, particularly if the weather be at all hot, the substances are so soft as to be semi-fluid; a circumstance which renders it difficult to ascertain its internal arrangement, and which sufficiently accounts for the contradictory descriptions of it above mentioned.

M. Bellingeri proceeds to treat, at considerable length, of the distribution of the grey matter in man and other animals, and subsequently describes the external appearance and the origin of the nerves. Instead, however, of following him through this detail, we shall lay before our readers the conclusions at which he arrives; in doing which, we shall follow the text as closely as is consistent with perspicuity.

The summary, then, of M. Bellingeri's opinions is, that the spinal marrow is composed of two substances,—viz. grey and white; the former being situated in the centre, the latter on the surface; that its structure is fibrous; that the quantity of the white substance in the whole spinal cord is much greater than the quantity of the grey, except in the sacral region, where the proportions are either equal or in favour of the grey. The form of this last generally resembles the figure)(; the anterior horns of the grey matter no where reaches so far as the periphery of the cord: and these phenomena are presented by the spinal marrow of the human species, the ox, kid, and birds. The grey substance in man is placed rather anteriorly as far as the lumbar region, where, however, as well as throughout the whole region of the sacrum, it is either in the middle, or inclines towards the posterior surface. But, in the spinal cords of the other animals above mentioned, it is generally placed rather to the posterior part, except in the region of the second and third cervical vertebræ in the ox, and the middle of the lumbar region, and the upper and middle parts of the sacral region, where it either occupies the centre or inclines forwards; in birds, it is much more anterior in the middle of the sacral region. In man, and the other animals above mentioned, the portion of the grey substance is constantly different in the superior lumbar and superior sacral regions, from what it is in other parts. The nervous filaments arise from both of these substances, white and grey.

There are in the human subject, and in the animals above mentioned, central furrows, anterior and posterior; whereof the former is the larger, but no where penetrates so far as the grey substance; the second is smaller, and descends till it touches the

said substance. There are, besides, in all spinal cords, lateral furrows, anterior and posterior, extending through the whole length of the cord. From the disposition of these grooves and fissures, in conjunction with the arrangement of the grey matter, it arises that the spinal marrow in man, and the other animals above mentioned, is divided into six fasciculi, of which two are anterior, two lateral, and two posterior. The anterior fasciculi are nearly, but not entirely, separated from each other: in the same way, they are divided from the lateral; but the posterior are entirely detached, both from each other and from the lateral. This arrangement is common to man and animals. The lateral fasciculi are almost every where thicker and more crowded than the rest, and they give to the spinal cord its greater or less degree of thickness. The posterior fasciculi in man (except in the lumbar and sacral regions) are thicker than the anterior: on the contrary, in the other animals above alluded to, the anterior fasciculi are generally rather thicker than the posterior, except in the superior cervical region in the ox, and in the inferior lumbar and sacral regions in the ox, kid, and birds. The anterior fasciculi, as well as the posterior, are generally of a flat form, and are alternately increased and diminished in thickness in various parts of their course. The anterior fasciculi communicate, in man, with the corpora pyramidalia, the crura cerebri, and thence with the brain proper; the lateral fasciculi are continued into the corpora restiformia; while the posterior fasciculi communicate directly with the cerebellum. So that it appears, as stated by Soemmering, that the spinal cord is chiefly composed of prolongations from the cerebellum; or, at least, communicate chiefly with it.

With regard to the structure of the anterior roots of the spinal nerves, it is demonstrated that they are composed of filaments, having a triple origin,—first, from the anterior fasciculi; secondly, from the region of the anterior lateral fissures; and lastly, from the lateral fasciculi. There are, however, some fibres which rise directly from the white substance of the anterior and lateral fasciculi; others which, perhaps, come from the anterior horns of the grey matter; and lastly, there are some which come from the surface of the spinal marrow, and others from its interior. The anterior roots are composed of numerous nervous fibres, having nearly the same thickness, each of which arises separately, approaches the neighbouring fibres of the same root, but does not blend with them: each fibre is about the size of a hair, and is never subdivided into smaller threads. The anterior roots, at least in man, do not enter the spinal ganglia.

The posterior roots are composed of fibres, rising in a triple

order: the chief part comes directly from the posterior cornua of the grey substance; other filaments, but these are few in number, have their origin from the white substance of the posterior fasciculi; others, in a similar manner, from the lateral fasciculi. The second and third sets of fibres come from the surface and deeper parts of the substance of the cord. There are filaments, however, which are finer than the others, being of the same size as the fibres of the anterior roots: these are not numerous. In another set, the filaments are much thicker and more numerous, being composed of many very small fibres, which are much interwoven, both with each other and with the neighbouring filaments, so that the fibres of the posterior root can by no means be separated; and thus these roots and their filaments, both in their origin and course, present a plexuose form. Frequently the neighbouring posterior roots of the same side communicate with each other by means of nervous twigs; and these roots alone constitute the spinal ganglia.

By instituting a comparison between the anterior and posterior roots, four circumstances may be remarked, in which they differ:—1st. The filaments of the posterior roots are, generally speaking, thicker and less numerous than the filaments of the anterior roots; 2d, the filaments of the posterior alone present a plexuose structure; 3d, the posterior roots alone form the spinal ganglia; 4th, the neighbouring posterior roots almost all communicate by nervous filaments.

All the filaments of the accessory nerves arise from the lateral fasciculi of the spinal cord, and penetrate deep into its substance: no communication intervenes between the accessory nerve and the posterior roots of the spinal nerves. Such is the case in the ox; but, in the human subject, although the nerve has the same origin, it sometimes receives many or all the fibres of the posterior roots of the first pair; and occasionally, although but seldom, a filament of the same root of the second pair. But the accessory nerves do not retain these fibres, which, on the contrary, go to constitute or increase the posterior root of the first pair of cervical nerves.

Of the functions of the anterior roots.—That the anterior roots of the spinal nerves are composed of filaments having a triple origin, has been anatomically demonstrated, as well as that some of these come from the anterior fasciculi, some from the region of the anterior lateral fissures, and others from the lateral fasciculi. Now, M. Bellingeri regards those filaments which come from the anterior fasciculi as serving the purpose of voluntary motion, because they arise from prolongations of the cerebrum; and holds that anatomy, physiology, and pathology, combine to prove that the brain proper presides over voluntary motion: thus differing in opinion from his colleague,

Rolando, from Flourens, and other recent experimentalists. The grounds assigned for his dissenting are as follow:—The third pair, or motor oculorum, which is a nerve of motion alone, rises chiefly from the crura cerebri; the sixth pair, or abductor oculorum, likewise purely a nerve of motion, arises from the superior extremity of the corpora pyramidalia, which again are productions of the cerebrum; the principal fibres of the twelfth nerve, or hypoglossus, which presides over the motions of the tongue, likewise arise from the external sides of the corpora pyramidalia. So much for anatomy and physiology, as proving that the brain proper regulates voluntary motion; while, with regard to pathology, he remarks, that paralysis, occurring on the side opposite the injury received, proves the brain proper to be the seat of motion; because, if hemiplegia occurred from injury of the cerebellum, it could not be on the opposite side, from the absence of any decussations of its prolongations. He further supports himself by the authorities of Franck and Willis; and thus, holding it to be demonstrated that the cerebrum, and its prolongations, govern voluntary motion, he thinks it reasonable to suppose that the filaments of the anterior roots, arising from the anterior fasciculi of the spinal marrow, are likewise destined for the same purpose. With respect to the filaments of the anterior roots which have their origin in the region of the anterior lateral fissures, he hazards no conjecture; seeing he is doubtful whether they arise from the white matter only, or partly from the grey likewise. But, with regard to the filaments coming from the lateral fasciculi, he holds them to be destined for the organic functions; an opinion which, he thinks, is rendered probable by the analogy of the spinal accessory. Certain filaments of this nerve rise from the lateral fasciculi of the cord, and form the internal branch; which branch, uniting with the gastro-pulmonary, can only perform organic and involuntary functions. He likewise believes the filaments of the anterior roots coming from the lateral fasciculi, to be those which concur to form the intercostal nerve; but this is advanced rather as a conjecture than as an assertion. It is not supposed, however, that all the filaments in question are expended upon the intercostal, but that many of them go to constitute part of the spinal nerves, and are thus distributed over the various parts of the body, performing the natural or organic functions,—as circulation, absorption, nutrition, secretion, &c.

Of the uses of the posterior roots.—Touching the uses of the posterior roots, the following opinions are advanced:—Those filaments which come from the posterior fasciculi, are thought to be destined for voluntary motion; those which come from the lateral fasciculi, are supposed to answer the same purposes

as the corresponding filaments of the anterior roots,—viz. the regulation of the organic functions. The filaments arising from the posterior cornua of the grey matter, are supposed by our author to communicate the sense of touch. The posterior roots alone present a plexuose structure in their origin and course: they constitute the spinal ganglia, and are composed of thicker filaments than the anterior roots; besides, many of them communicate directly with the grey matter,—characters distinguishing the nerves of sensation from those of function. The olfactory nerves, the optic, and the auditory, evidently rise from grey matter, or communicate with it at their origin, (the first of these, indeed, is chiefly formed of this substance,) and have a plexuose or ganglioniform structure; besides which, they are larger than the nerves destined for the purposes of motion. On the other hand, the nerves of voluntary motion arise from the white medullary matter, have no plexuose or ganglioniform structure, and are thinner or finer than the sentient nerves; such are the third, fourth, and sixth, the fascial nerve, and the hypoglossus. Thus, according to M. Bellingeri, the posterior roots alone are destined to effect the sense of touch; and further, that this function is only performed by those filaments of the posterior roots which rise directly from the posterior cornua of the grey matter, or communicate directly with them. These opinions, he informs us, were committed to writing before he was made acquainted with the views recently advanced by other physiologists on this subject; and he dissents from those who hold that the posterior roots have no influence over motion.

In a chapter, "*De Nervorum Antagonismo*," we find some remarks upon the various kinds of motion performed by the human body, particularly with regard to the opposing actions of flexion and extension, adduction and abduction. Is it to be supposed (asks the author) that the nerves and nervous filaments which come from the brain, cerebellum, and their prolongations, serve indiscriminately for these movements? Are not the cerebral nerves rather destined for the one kind of motion, and those of the cerebellum for the other? These queries he answers, by declaring his belief that the nerves coming from the cerebrum, and its productions, serve for the purposes of flexion and abduction; while those of the cerebellum, and its productions, serve for the functions of extension and adduction. The fourth pair of nerves (he remarks) are opposed to the sixth; the former being adductors, and coming from a production of the cerebellum; the latter abductors, and coming from a production of the cerebrum. The third pair governs numerous and opposite movements of the eye, and accordingly it has a double origin,—one from the cerebrum, and the other from the cerebellum; for, besides the trunk of the third pair coming from the

crura cerebri, there are accessory nerves, discovered by MALACARNE, which arise from the crura cerebelli. The tongue, likewise, which is gifted with various and opposite movements, is supplied with nerves having both a cerebral and cerebellic origin. Carrying on this idea, the posterior roots of the spinal nerves are regarded as destined for the purposes of extension. In man, the posterior fasciculi are thicker than the anterior, throughout almost the entire length of the spinal cord, which gives a corresponding superiority to the posterior roots; but, in the human body, the perpendicular position is more frequent than any other, and this position requires greater power of extension. In the upper part of the neck of the ox, the posterior fasciculi are much thicker than the anterior fasciculi, which is accounted for by the force required to sustain the head. But, in the region of the back, the posterior fasciculi are not so thick as the anterior; the horizontal position of the animal requiring less power in the dorsal muscles. Upon the same principle, it may be explained why the posterior fasciculi are much thicker than the anterior in the sacral region alone of birds: viz. the exterior muscles of the lower extremities requiring greater strength to support the body when the animal stands. The author next proceeds to support this view of the subject by pathological references, particularly to tetanic affections; but into these we cannot afford space to follow him.

We have a few words on the uses of the grey and white matters, the object of which, as above mentioned, is to show that the former is intended for sensation, and the latter for motion; and a chapter on the *spinal accessory*; but this contains nothing of interest to those acquainted with the recent discoveries on this subject.

MEDICAL AND PHYSICAL INTELLIGENCE.

PATHOLOGY.

1. *Influence of the Stomach on the Production of Apoplexy.*—A MEMOIR on this subject, by J. R. RICHOND, has lately received the prize of the Royal Society of Medicine of Bordeaux. The following are the conclusions at which the author arrives:—

1. The stomach exercises a great influence on the brain; the close connexion which exists between them being indispensable to the execution of their functions.

2. The stomach expresses its wants to the brain, by the sensation of hunger and thirst; the former announces the necessity of excitement, the latter is the result of it.

3. Besides the functions of nutrition, which it effectually fulfils, the

stomach likewise tends to keep the brain in the condition favourable for its action: it is, as it were, the balance of life.

4. The necessity of excitement, experienced by the mucous membrane of the digestive organs, is one of the most imperious, and one, the satisfying of which is the most necessary to the regularity of all the movements.

5. According as this excitement is more or less active, so is the action of the brain more or less energetic. To be convinced of this, it is only necessary to observe the effects of spirituous potations.

6. Drunkenness is the result of cerebral excitement, caused by the sympathetic action of the stimulated gastric membrane.

7. The ideas relative to taste are generally subordinate to the state of the mucous membrane of the digestive canal; and very frequently the moral is modified according to the sensations which the brain then perceives.

8. The influence of the stomach on the brain may be appreciated in the state of sleep, as well as watching.

9. In the state of disease, the stomach communicates the suffering to the brain; and from this participation results the development of cerebral phenomena, more or less perceptible to the observer.

10. These phenomena are not always purely sympathetic: the brain and its membranes are really affected more frequently than is supposed.

11. When the gastric irritation is chronic, and of long standing, there are almost always alterations in the brain or its coverings, which, by their sudden aggravation, may give rise to mania, epilepsy, and sometimes apoplexy.

12. This sudden aggravation which produces apoplexy, is most frequently the result of an excitement of the stomach communicated to the brain: it is in this way that it very frequently takes place during a repast, after indigestion, excess in spirituous liquors, the action of an emetic, &c.

13. The extravasation of blood may sometimes be the result of this, but its existence is only eventual, and it does not constitute the essence of the malady.

14. This extravasation, when it happens, is at the spot where the irritation predominated; because the vessels of this part, always gorged with the blood which flowed to it, have become dilated and softened, and thus rendered more liable to rupture.

15. If there be a partial softening of the brain, the blood may escape at this point, and produce those caverns which have so improperly been regarded as the product of hemorrhagy alone.

16. Very often, in chronic gastritis, we meet with evident alterations of the heart, which are not to be regarded as independent, but which are the result of the sympathetic transmission of the irritation of the stomach.

17. The treatment of apoplexy ought to be entirely antiphlogistic, for the disease is one of irritation.

18. Emetics, purgatives, and blisters, are, for the most part, injurious. When they succeed, it is by producing a revulsion; but this is rarely obtained, and most frequently the irritation which ought to

produce it, turns to the increase of the disease it was intended to combat.

19. To attempt to procure this revulsion, would be to subject the patient to great danger, without much chance of success. It is easy, in truth, to conceive that a considerable alteration of the brain, or its membranes, cannot be cured in a rapid manner; and that the displacement of the irritation which has caused it must be very difficult, particularly if the means employed act upon a surface connected so intimately with the brain as the mucous membrane of the stomach.

20. All the substances which are regarded as proper to restore strength, to give tone, to diminish stupor, debility, &c. must be proscribed with care, so long as any irritation of the brain and stomach exists.

21. To have recourse to excitants, such as electricity, the nux vomica, &c. against consecutive paralysis, is to have an idea of the disease entirely false. These means cannot repair the ravages which exist in the brain, whilst they are of a nature to increase and aggravate them.

22. During convalescence, the stomach merits very particular attention: the practitioner ought never to forget that too much stimulation may produce fatal mischief. The lightest diet, mild drinks, an exact observance of all the principles of hygiene, and the removal of the causes capable of exciting the stomach and brain,—such are the means most proper to promote a recovery.

23. The employment of the means proper to calm cerebral and gastric irritation, which generally exist in persons having a predisposition to apoplexy, is the only anti-apoplectic to be trusted.—(*Bulletin des Sciences Medicales*, Juillet.)

2. *Palsy of the Lower Extremities cured without the assistance of Art.*—In a recent Number of a Journal called "Hippocrates," published at Rotterdam, and professing to embrace every branch of medical science, the case of a young girl is mentioned, who, after a fever, accompanied with affections of the nerves, had the inferior parts of the body paralysed: the legs were very much contracted; and this state of matters appears to have lasted for some years. In her seventeenth year, after having menstruated for the first time, the use of her limbs was suddenly restored. The author (Dr. HELLER) expresses his astonishment that the knee-joints had not been attacked with anchyloses during so long a period.—(*Hippocrates, Magazijn Toegewijd aan den Geheelen omvang van de Geneeskunde*, 1823.)

3. *Symptoms of Phthisis brought on from the presence of a foreign Body.*—A woman, about fifty years of age, had all the symptoms of phthisis, for which she was treated without success. All at once she brought up a fragment of bone by coughing, which she recollected having swallowed eight months before, when eating soup. She voided a pint and a half of purulent matter in the course of twenty-four hours, and became perfectly restored to health. Dr. S. LUISCIUS, who relates the case, puts as a query—where was the bone lodged?—(*Ib.*)

MIDWIFERY.

4. *Cases of Sudden Parturition.*—Mrs. M., a poor woman, aged twenty-seven, being in the habit of assisting her husband in the dredging business, like many other females here (Milford Haven), had spent the whole of this day (Oct. 15, 1823,) labouring on the water, although in the ninth month of pregnancy. On arriving home in the evening, and stepping from the boat to the shore, without any premonitory symptom whatever, she was delivered of a fine boy, which actually fell on the beach. The mother picked it up, carried it to her cottage, a distance of a quarter of a mile; and neither the babe nor herself sustained any inconvenience.—N. B. The inhabitants of the village where she resides have generally quick labours, and are only one remove from a state of nature in their habits.

Mrs. D., a middle-aged woman, in the ninth month of her pregnancy, having dressed herself for breakfast on the morning of February 17th, 1824, was in the act of coming down stairs, when suddenly a pain took her, she fell on her knees, and was delivered of a female child, before any one could arrive to her assistance. In this case the child was still-born; nor could I by any means animate it, although I persevered more than an hour.—(*Private letter from* W. THOMAS, Esq.)

MISCELLANEOUS.

5. *New Regulations for granting Degrees in Medicine, in the University of Edinburgh.*—We have been favoured with the perusal of a printed paper, entitled "Regulations for granting Degrees in Medicine, proposed by the Medical Faculty to the Senatus Academicus, July, 1824, and to be decided on by the Senatus in October, 1824."

This paper has caused a great "sensation" in the northern metropolis: it has given birth to several smart pamphlets, and to a whole host of controversial letters in the columns of the Edinburgh newspapers. Our readers must naturally feel a degree of interest in the questions which it agitates; some as being already the faithful *alumni* of that University; others from looking forward to it, as the source of their future honours; a few out of regard to a school which has contributed so essentially to the advancement of medical science; and the remainder out of mere curiosity. For their sakes we shall attempt a hasty analysis of the projected regulations, accompanied by such reflections as have occurred to us during their perusal; and we shall be happy if any observations of ours may assist the Senatus Academicus in their deliberations on the subject, which are, we find, to take place during the present month. The changes proposed in the mode of obtaining degrees in Edinburgh are reducible to the eight following heads:—

1st. The writing of a Thesis is made optional.

2. The period of study is extended from three to four years.

3. The indulgence granted for study in a foreign University is restricted to one year.

4. Study in London is allowed to count for one year.

5. A six months' course of midwifery is added to the established routine of study, the "curriculum," as it is technically called.

6. A three months' course of chemical instruction is added to the six months previously required.

7. Attendance on an hospital for six months in two separate years, is now proposed; or, in lieu of this, attendance for six months as an hospital clerk, or pupil for nine months at a dispensary, or service in his Majesty's army or navy.

8. The examinations, instead of being altogether in Latin, as heretofore, are modelled after the fashion of the Company of Apothecaries in London;—that is to say, the student is examined, "first, as to his proficiency in medical Latin, and in the prescribing of medicines; and afterwards, in English, on the different branches of medical science."

Those of our readers who are acquainted with the old system of graduation in Edinburgh, will find here the traces of a very *radical reform.*

The circumstances which have rendered this necessary are quite unknown to us. That the University has not fallen off in point of numbers is apparent from this,—that 109 gentlemen received the degree of M. D. there on Monday, the 2d of August last; and, that it has fallen off in point of general character, the professors surely would not wish to insinuate. What, therefore, can have induced the Medical Faculty to make such changes as are here contemplated, we are at a loss to conjecture.

But, granting that the necessity of the case could be made apparent to us, it remains to inquire whether the projected alterations are calculated to add to the fame of the University,—to advance the dignity of the profession of physic,—or perceptibly to increase the quantum of learning with which each individual M. D. leaves his Alma Mater, to enter on the duties of his profession.

1st. Making the Thesis optional, is copied from the regulations of the University of Glasgow; but we doubt whether the Medical Faculty of Edinburgh have, in this instance, selected for imitation the best part of their sister University's proceedings. True it is, that a Thesis is often the production of a grinder;—true it is, that, though the *ipsissima verba* of the candidate himself, it often contains the merest commonplace. Still it is a stimulus to exertion: it gives the candidate a certain feeling of consequence; it makes him an author once at least in his life; and, above all, it constitutes a ground of distinction between the diploma of Edinburgh, and that of the Company of Apothecaries in London. A Thesis, however, is not necessarily such trash as this: many a one has proved the nucleus of works which have, in later life, stamped the author with the character of an acute reasoner or accurate observer. But, independent of all this, a Thesis is either a good thing or a bad thing. If it is really unnecessary, why not strike it out altogether? Why give the candidate an option about this, and deny him the same option in every other part of the whole system of graduation?

2d. The extension of the period of study from three to four years, without any corresponding extension of the necessary courses of instruction, appears to us to be only opening the door to idleness, on the part of the student, for the first year or two of his academical residence.

3d. To the third proposed change, we can see no objection.

4th. A caviller might argue against the fourth, that it makes the exercise of the highest privilege of the University dependent on the pleasure of the surgeons and apothecaries of London; for it expressly stipulates,

that such lectures only will be held to constitute study in London, as qualify for examination by the College of Surgeons and Company of Apothecaries. Here we anticipate no small share of trouble to the Dean of Faculty in Edinburgh hereafter, from this regulation; and we respectfully suggest to the Senatus, before deciding on this point, to read with attention the circular of the College of Surgeons of London, published in this Journal, in the Number for June of the present year, and satisfy themselves that they understand it.

5th. A six months' course of midwifery is now considered necessary for the education of a physician. We have heard it rumoured that this change met with great opposition on the part of the Medical Faculty, and that it was, in fact, forced upon them by a vote of their patrons, the Town Council. If this be so, it would be ungenerous to reproach the Faculty with it; but we must say, the innovation does not a little surprise us. Attendance on midwifery lectures is not required, either by the College of Surgeons or Company of Apothecaries in London, though the members of both the one and the other practise that art and mystery. On the other hand, midwifery lectures are now to be insisted on by the Medical Faculty of Edinburgh, as essential to a physician's education, though they know well enough that no inconvenience has hitherto resulted from the omission of that portion of study; and that the merits of their graduates will never be judged of by their knowledge of, or deficiency in, the obstetric art, the world making a very proper distinction between the physician and the practising accoucheur.

The attempt to evade this argument, by tacking to the lectures on midwifery the diseases of women and children, is hardly worthy of notice. If the diseases of one sex, or of one period of life, require separate investigation, so, by parity of reasoning, should there be separate lectures for diseases of old age, diseases peculiar to sedentary trades, diseases of hot climates, diseases of the eyes and ears, &c. &c. &c. If any additional class or classes had been added to the "curriculum" of a physician's education, we should, with great deference, have suggested a course of dissections, a course of comparative anatomy, and a course of medical jurisprudence.

6th. To the sixth proposed change no reasonable objection can be made.

7th. The seventh appears to us a most unnecessary, as well as most cumbersome, addition to the University regulations. The object is to ensure attention to hospital practice, during at least two years. Surely this is sufficiently provided for in the previous regulations, which require that the student should have attended "clinical lectures for nine months, and the hospital or hospitals connected with them." But, even with all their nicety of wording, the Faculty have omitted the case of the student entering the Infirmary of Edinburgh for one year, from the first day of July. He will then have attended six months in two "separate" years, unless, indeed, something more is meant by the term *separate* than we are aware of. We cannot, for our own parts, properly understand what it is that service in his Majesty's navy or army, or attendance on a London dispensary, "relieving 2000 patients annually," is to be an equivalent for.

8th. The last, but not the least, in the projected alterations of the

Edinburgh Faculty of Physic, relates to the language in which the examinations for degrees are hereafter to be held. Whatever doubts we might have had on some particular points, we can have none here; and we do earnestly call upon the Senatus Academiens to pause before they sanction a measure calculated, in our opinion, to do irreparable mischief to the profession of the physician. If it be argued, that the sciences of chemistry and pharmacy have so grown up since the days of the Romans, that it is impossible to descant on such subjects in Latin; and that the compounds of iodine and chlorine bid defiance both to grammar and dictionary, let there be an examination on these branches of science in English; but let the student be examined in anatomy, in physiology, and in pathology, in that language in which Celsus wrote, and Harvey wrote, and Sydenham wrote; men, with whose works it is devoutly to be hoped the graduates of the University of Edinburgh are familiar. It is frivolous and vexatious to meet this objection by saying, that an examination is still to be held to ascertain the student's proficiency in "medical Latin." The answer to this is obvious. If he be properly skilled in "medical Latin," he must be quite competent to answer questions on the different branches of medical science in that language. As the regulations now stand, the examination in medical Latin will, in a few years, dwindle into a mere form; and ultimately the graduate of Edinburgh will be on a par, in point of classical acquirements, with the apothecary's apprentice in London. The natural consequence of this will be, that, from deficiency in Latin, he will be refused admission into the College of Physicians in London, to the discredit of the University of Edinburgh, and the degradation of the profession of the physician.

This is not an exaggerated picture; and we again intreat the Faculty of Edinburgh to reconsider this portion of their projected changes, and, if possible, to return to those good old days when their University stood at least as high in public esteem as it is likely to do under the "new regulations." If this be impossible,—if the die be cast, and a new system determined on, because the Professors are tired of the old one, then we would suggest to the Faculty to make it optional with the student, whether he be examined in English or Latin; and, at all events, to introduce a clause permitting foreigners to be examined in the Latin language.

These are all the observations we have to offer upon the proposed changes; and, in concluding, we cannot but remark, that the only important deficiency in the existing regulations remains without any provision; or, rather, that, from the addition of another year, it is rendered more likely than ever to admit of serious abuse. We allude to the fact that no efficient measures are adopted for securing the *actual residence* of the student: at present, it is notorious that any one, after having once matriculated, may spend the rest of the session in London, Paris, or where he pleases. This, indeed, requires change and reformation.

We have only one word more to say. The following interesting N.B. is appended to the new code:—"The Medical Faculty mean also to propose to the Senatus to petition government for a remission of the tax on medical degrees, imposed in 1809." It is impossible to read this without smiling,—it has so much the appearance of a bonus held out to

the student, as a compensation for the additional expence attending the fourth year of study. It must be recollected, however, that government may possibly be quite satisfied with the existing order of things: nay, for aught we know, they may be very much inclined, when their attention is called to it, to *increase*, instead of taking off the said tax. If the University of Edinburgh, therefore, would take our humble advice, they would say nothing about it, drop the new regulations, and adhere stedfastly to the old system, of which we never heard any complaints (except that just alluded to), till the Faculty of Medicine themselves, by their own acts and deeds, seemed to hint that something was "rotten in the state of Denmark."

6. *Medical, Clerical, and General Life-Assurance Company.*—This Institution, we understand, has been opened, and the business commenced, with every prospect of success. For the particulars, we refer our readers to the advertisement upon the Wrapper.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

*** *It having been hinted to us that gentlemen, sending copies of their Works, prefer having their titles given at length, it is our intention, in future, to comply with this suggestion: but it is to be observed, that no books can be entered on this List except those sent to us for the purpose;—finding, in the lists hitherto transmitted, that the names of works have frequently been given as published, which have not appeared for weeks, or even months after.*

The Medical Student's Guide; comprising—Regulations for the Examination of Students at the Royal College of Surgeons, London, and at Apothecaries' Hall; Terms of the Surgical and Medical Practice of the Hospitals and Dispensaries in London; and of the various Lectures, with the Hours of Attendance; Pay of the Medical Department of the Army and Navy, and of the Honourable East-India Company's Service. Also, other Information interesting to the Medical Student. To which is added, a List of the most approved elementary and standard Medical Works.—18mo. pp. 102. London, 1824.

☞ *The Student will find this little Work of use on his first arrival in London.*

Practical Remarks. Part I. on Acute and Chronic Ophthalmia, Ulcers of the Eye, &c. &c. Part II. on Remittent Fever, viz. Simple and Complicated. By THOMAS O'HALLORAN, M.D. Author of Treatises on the Barcelona and Andalusian Yellow Fever Epidemics.—8vo. pp. 148. London, 1824.

Observations on the History and Treatment of the Ophthalmia accompanying the Secondary Forms of Lues Venerea. Illustrated by Cases. By THOMAS HEWSON, A.B. Member of the Royal College of Surgeons in Ireland; Professor of Materia Medica and Pharmacy to the College; and Surgeon of the Meath Hospital and County of Dublin Infirmary, &c. &c.—8vo. pp. 117. London, 1824.

Medicinisch-Chirurgische Zeitung. Von D. JOHAN NEPOM-EHRHART.—Inspruck, 1824.

Manuale Medicum; or, a Medical Pocket for the Use of Students. Adapted to the last Edition of the Pharmacopœia Londinensis. By H. L. SANDERS, Surgeon.—8vo. London, 1824.

Practical Observations on Hydrophobia; with a Review of the Remedies employed, and Suggestions for a different Treatment of the Disease. By JOHN BOOTH, M.D. formerly a President of the Royal Medical Society of Edinburgh; Member of the Royal College of Physicians in London; and one of the Physicians to the Birmingham General Hospital.—London, 1824.

METEOROLOGICAL JOURNAL,

From August 20, *to September* 19, 1824.

By Messrs. WILLIAM HARRIS and Co. 50, Holborn, London.

	MOON.	Rain gauge	THERM. 9 A.M.	THERM. MAX.	THERM. MIN.	BAROM. 9 A.M.	BAROM. 10 P.M.	DE LUC'S HYG. 9 A.M.	DE LUC'S HYG. 10 P.M.	WIND. 9 A.M.	WIND. 10 P.M.	ATMOSPHERIC VARIATIONS. 9 A.M.	ATMOSPHERIC VARIATIONS. 2 P.M.	ATMOSPHERIC VARIATIONS. 10 P.M.
Aug.														
20			60	65	56	29.78	29.80	77	78	W	W	Overc.	Cloud.	Cloud.
21			60	65	52	29.74	29.80	80	78	W	NW	Rain	Rain	Cloud.
22		.56	55	65	50	30.00	30.07	78	80	NE	N			Fine
23			50	68	51	30.07	30.10	80	78	N	NE	Fine	Fine	
24	●		51	65	50	30.16	30.15	79	82	NE	N	Overc.		
25			57	70	58	30.26	30.25	80	78	E	ESE	Fine		
26			63	67	52	30.30	30.27	75	78	NE	E	Fair		
27			65	67	56	30.25	30.12	75	75	ENE	NE	Fine		
28			64	79	56	30.00	29.90	75	80	ENE	E			
29			54	78	55	29.87	29.87	80	76	E	SW			
30			60	76	53	29.87	29.83	84	80	SW	NNE	Foggy		
31	☽		59	72	59	29.87	29.92	85	80	NE	NNE	Overc.		
Sep.														
1			66	81	60	29.98	30.00	80	77	E	SSW	Fine		
2			69	83	66	30.00	29.99	79	78	ESE	NE			
3			70	78	65	29.93	29.86	70	76	ESE	WSW	Foggy	Overc.	Cloud.
4			67	74	59	29.82	29.80	76	78	W	WSW	Cloud.		
5			65	73	57	29.74	29.67	75	70	WSW	SW	Fine	Fine	Fine
6			62	70	57	29.50	29.45	77	77	S	WSW	Cloud.	Sho'ry	Cloud.
7			63	65	55	29.50	29.44	75	87	SW	WSW			Fine
8	○	145	53	62	50	29.40	29.41	85	82	SW	W	Rain	Fine	Rain
9			55	62	52	29.60	29.70	80	80	W	NNE	Fine	Rain	
10		.77	53	64	45	29.74	29.72	80	89	NW	SE	Cloud.		
11			60	65	55	29.60	29.73	90	90	SSW	SW	Fine	Sho'ry	Rain
12		.70	57	65	52	29.57	29.80	88	83	SW	SW	Rain		Fine
13			59	67	57	30.00	30.05	80	77	WSW	SW	Fine	Fine	
14			62	67	62	30.01	29.97	71	78	S	SSW	Cloud.		
15			65	69	64	30.01	30.10	80	79	SSW	W	Fine		
16	☾		65	72	59	30.20	30.15	75	80	W	SE			
17			67	71	60	30.12	30.00	90	95	E	SE	Foggy		Mist
18			65	72	58	30.03	29.95	95	90	E	ESE	Misty		Fine
19			60	65	55	29.90	29.80	90	93	W	W	Overc.	Fine	Overc.

The quantity of rain fallen in the month of August, was 2 inches and 87.100ths.

ERRATA *in our last Number.*

Page 195, line 9th of the note, for *periodide* read *protiodide.*
— 196, — 9 from the top, for *anticus* read *arterius.*

THE LONDON

Medical and Physical Journal.

Nº 5 OF VOL. LII.] NOVEMBER, 1824. [Nº 309.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,

SELECT OBSERVATIONS, &c.

ART. I.—*Observations on Curvatures of the Spine.* By JAMES MACARTNEY, M.D. M.R.I.A. F.R.S. Professor of Anatomy and Surgery in the University of Dublin, &c. &c.

To the Editors of the London Medical and Physical Journal.

GENTLEMEN,—The paper I send you was printed in the Transactions of the Royal Irish Academy, in the year 1817; but, as none of the late writers on Curvatures of the Spine have noticed this Essay, I shall be obliged by your giving it greater publicity than it seems to have yet possessed, by inserting it in your Journal; and am your very obedient servant,

JAMES MACARTNEY.

DISTORTION of the spinal column may arise from three causes. The first is that peculiar disease, which, terminating in the ulceration of the bodies of the vertebræ, necessarily induces an abrupt and very evident curvature; or, more properly, an angular figure of the spine. The second is that state of the bones, in which, from a deficiency of earthy matter in their composition, they are incapable of preserving their natural form; but bend or diminish under the operation of pressure. The spine, in those circumstances, will exhibit very different degrees of curvature, in proportion to the softness of the bones. In some persons, the deformity may be very slight; but, in others, there may be several very considerable lateral flexures of the spine. The third cause of distorted spine is the feebleness of those muscles which are employed in maintaining the erect position of the body. The tendency of a weakened state of the muscles to augment the more serious kinds of curvature, and to induce, even without a softened condition of the bones, an evident distortion of the back, does not appear to have yet received sufficient consideration, either from medical men, or

from those whose interest it is early to notice, and prevent, deformity in young people.

Slight curvatures are too often neglected; and hence, the wrong direction being given to the spinal column of bones, a serious and permanent distortion is apt to be subsequently established during a period of ill health, or by confinement to some one attitude from peculiar studies or occupation.

Slight curvatures of the spine are sometimes also disregarded, under the erroneous supposition that they will afterwards be concealed by modes of dress. No means, however artful or ingenious, will serve to disguise any distortion of the spine so well, that its injurious effects on the whole figure will not be felt, although the cause of the disagreeable appearance may not be known. A perfectly straight spine communicates to the motions, not only of the trunk, but of the extremities, a facility and grace which secretly and irresistibly influence our judgment of the figure, in the same manner as the countenance, sooner or later, determines our opinion of the face.

Spinal curvature is so much more frequent in females than men, than it might, with great reason, be considered as a complaint peculiar to the sex.

These circumstances render it highly necessary to watch and prevent every deviation from the natural form of the back in growing girls.

The progress of spinal curvature, where the other bones do not exhibit an undue flexure from softness, is very insidious. Distortion may exist for a considerable time, without being known. Parents are usually the last to notice it. Before there is any perceptible deformity, the young person may be observed to avoid, when at rest, the erect position of the body, by reclining on her companions, or against any near object; or will be seen to prefer some particular position, in which the weight of the head is thrown off the middle line of the body. In leaning, also, to write or draw, one side will be often favoured more than the other; and no admonition will be sufficient to check the disposition to seek rest for the spine.

The first appearance of deformity is usually an unequal projection of the shoulder-blades, which is supposed to be a defect in the situation of the scapula itself. Every degree of lateral curvature in the spine causes a corresponding prominence of the ribs, on the side to which the vertebræ are bent; and this again produces the eminence of the shoulder-blade on the same side.

In examining the external appearance of the spine, the person should be made to sit, for some time, with the body erect, in order to produce a degree of fatigue; when, if there be any tendency to lateral curvature, it will be detected by the spine

resting itself by inclining towards the side, rather than forwards. The degree of curvature may be ascertained by traeing the projection of the spinous proeesses along the baek, the situation of each of which should be marked with ink for future instruction.

In plaee of the lateral curvature, it sometimes happens that the natural S-like flexures of the spine are inereased, so as to produce a degree of deformity. This is particularly to be observed with respeet to the dorsal flexure of the spine, in ehildren of weakly eonstitutions, whether male or female. The stooping of the shoulders, which marks the approach of old age, is also to be aceounted for by the diminished strength of the muscles of the back. I have known but two eases, in which the natural backward flexure of the loins was inereased so as to amount to distortion.

When curvature of the spine has existed for any length of time, the bodies of the vertebræ which are eoneerned conform to the wrong inclination the spine has assumed. They are rendered thin, on one side, by absorption; whilst the other side preserves, or in some plaees exeeeds, its natural thickness. When any eonsiderable curvature has existed for a length of time, it necessarily induces a seeond in an opposite direction of some other part of the spine; and this again often gives rise to a third, in the direetion of the first.

The means which are most eommonly supposed to be neeessary for avoiding deformities of the spine, are, I believe, those whieh have the greatest share in produeing the usual spinal eurvature. I allude to the attempts whieh are made to oblige young people to maintain the body immoveably in the erect posture; and to the restraint whieh is imposed on the development of the trunk, and the exercise of its muscles, by the early use of stays.

It may not be improper to state some physiological prineiples, on which the above opinion is founded.

It is a well-known law of muscular action, that it cannot be maintained without intervals of repose. No determination will enable a person to hold the arm, in the extended position, more than a few minutes. The sensation of fatigue is more intolerable than the greatest pain. We have frequent opportunities of seeing this exemplified during surgieal operations.

It is generally acknowledged, that muscles are strengthened by being exereised; but the difference between the ordinary actions of muscles, and those attended with effort, has been overlooked. The bulk and strength of muscles are not increased by the customary aetions, although ever so often repeated; while exertion of muselcs beyond their habitual operations, even with long intervals of rest, will augment their magnitude and power to an extent that it is difficult to limit. This law of muscular

action applies equally to the voluntary and involuntary muscles. The heart, the diaphragm, and the muscles so constantly employed in speech, in the motions of the eyes and lips, gain no additional bulk during life, unless exerted to an unusual degree.

As examples of a different kind, I may mention the enormous bulk the anterior muscles of the thigh arrive at in old stage-dancers, and the great strength the muscular parts of internal organs acquire, when there exists any obstruction to the expulsion of their contents.

A most extraordinary example of the last kind came under my knowledge some months ago, in which the left ventricle of the heart, in consequence of a diseased state of the aortic semilunar valves, had attained a degree of power, by the constant efforts it had to make, so disproportionate to the strength of the arteries, that the smaller branches of the latter were ruptured in several parts of the body, and coagula of blood formed, especially in the substance of the liver, and behind the peritoneum. The tunic of the liver at length gave way, and the patient died, from the quantity of blood that was shed into the cavity of the abdomen.

Another law of muscular action deserves to be noticed. Muscles lose power and bulk by disuse; but what would be disuse in one case, would not constitute it in another; or, in different words, in proportion to the frequency with which a muscle is intended to act, the necessity for its exercise exists, in order to prevent its degeneracy. There are some muscles in the human body, which are rarely put into full action. In animals we have examples of muscles which are only intended to be employed on particular occasions, that may never occur. Such muscles do not decline from disuse; whilst those that are provided for constant employment cannot remain at rest, without sustaining great diminution of their bulk and power.

Now, if we apply the preceding principles to the muscles attached to the spinal column, the injurious effects of exhausting their strength, by attempting to maintain any one permanent attitude of the body; of restraining their ever-varying motions; or of substituting, for their natural support to the bones of the spine, the artificial one of stays, must be sufficiently obvious.

Experience appears to accord exactly with theory on thi subject. We find that those distortions of the back which ar in a degree almost universal amongst women of the better rank of life, rarely occur in the other sex, who do not employ an e ternal support to the spine; that they are equally rare in femal who have never worn stays; and that those women who ha been early accustomed to carry burthens on the head, are qu remarkable for the straightness of the spine, and correctnesof the form of the shoulders.

I might add, that the neck, of which the motions are unconstrained by modes of dress, is scarcely ever distorted; although the weight of the head is chiefly borne by this portion of the spine.

As far as I have had the means of judging, or of collecting information from others, these remarks are equally applicable to the inhabitants of other countries, as to those of Ireland.

Besides the longitudinal muscles which are chiefly employed in erecting the spine, the flat muscles, which execute the rotatory motions of the shoulder-blade, are often not fully developed, from want of being exerted; the consequence of which is, that the weight of the upper extremity constantly tends to bring it downwards and forwards, producing too great a roundness of the shoulders, and a projection or constant elevation from the ribs of the posterior edge of the shoulder-blade.

If it came within the scope of this Paper, I could show many evil effects on the shape of the whole female bust, from external constraint. It is sufficient to state at present, that I have found those women, and only those, who never wore any other than loose vestments, to possess the form and proportions which are displayed in the most beautiful of the antique statues.

In seeking a remedy for distortions of the spine, it is not unnatural to place great reliance on different kinds of machinery. The operation of bandages and of artificial supports would appear, at first, to be very obvious and intelligible. The application, however, of mechanic force or pressure to the living body, with the view of rectifying deformities, requires the greatest care, discretion, and knowledge, of the vital properties of the different tissues engaged. It is too often entrusted to the judgment of mechanics, who construct and sell surgical apparatus, and thereby gain a certain degree of experience, undirected by any principles; a species of knowledge, which is always dangerous in those who have to manage the various and complicated powers of the living system.

It would be departing from the plan of this Paper, to enter into the merits or faults of various mechanical contrivances, which have been devised for correcting deformities of the trunk. The principle, however, on which they should be alone constructed and applied, may be stated to be that of removing weight and pressure from parts, which could not be enabled, by other means, to sustain the operation of these mechanic powers. All instruments have injurious effects, as far as they limit or interrupt the natural actions of the muscles. It is by muscular action that we not only move, but sustain, any one position of the body. The application of a splint to a broken leg is unavoidable; but, if the instrument were continued to be worn, it would ultimately render the limb useless, by destroying the

power of its muscles. Nature, indeed, sometimes adds elastic power to muscular, for the purpose of aiding and relieving the latter. This advantage is provided by the elastic ligaments of the spine in the human body, and still more so by those of the heavy-headed quadrupeds. If such a combination of power could be imitated by art, it would, no doubt, prove highly useful; but nothing of the kind has yet been attempted.

Mechanic motion and vital action are so different in their laws and nature, that it becomes necessary to make the former subordinate to the latter in the living body. I recollect but one instance in the structure of animals, where nature has substituted the one for the other: it is the joint of the tibia with the metatarsus in the stork, in which there is a mechanical contrivance for allowing the animal to rest, while standing on one leg, without any muscular effort.*

External machinery cannot be affixed to the body without in itself producing pressure somewhere. This may be well illustrated by the use of monitors and bandages for drawing the shoulders back, and, as it is ignorantly supposed, for opening the chest.

When these instruments leave any permanent effect, it is a hurtful one. The muscles of the scapula are rendered weak by disuse; the convexity of the superior ribs, on which the breadth and expansion of the chest depend, is diminished; and the anterior part of the ribs and sternum are thrown forwards, causing that shape which is known under the name of *hen-breasted.*

I have known several instances in which worse consequences followed this lateral compression of the chest in young women; such as difficult breathing and altered function of the skin, impaired powers of digestion, and great emaciation, in persons who had previously enjoyed robust health.

When it becomes necessary to relieve the spine from the weight of the superior parts of the body and the head, until by proper medical treatment the strength be sufficiently restored, I prefer the mode of resting on a flat surface, or, what is more comfortable, a gently-inclined plane, to any species of machine or bandage that has yet been invented. I think, however, that the effects of the recumbent posture are not always understood, and are sometimes over-rated. There appears to be no necessity for enjoining rest, as is usually done. On the contrary, the patient should rather be encouraged to exercise the spinal muscles by rolling about, and moving the arms and legs at pleasure; for which purpose a large platform, stuffed with wool, or a mattress, on which children can have their toys and plays with

* Dumeril and Cuvier have noticed this mechanism, but have unaccountably described it as existing in the joint of the knee. 2

their companions, is preferable to a sofa or plain board, which are most frequently employed.*

The recumbent position is sometimes resorted to as the sole means of curing, or of preventing, curved spine. In several celebrated boarding-schools in London, it is used indiscriminately for all species and degrees of distortion; and, in some seminaries, all the girls are condemned to get their lessons, during so many hours every day, in the supine posture, with the view of preventing the occurrence of deformity. It appears to me more than unnecessary to confine healthy girls to the recumbent position; yet too much caution cannot be used to prevent children leaning uniformly to one side, in the act of writing, drawing, &c.—more especially if they be weakly, or if they seem to prefer that particular position.†

The advantages from exercising the spinal muscles in various positions of the body, should never be lost sight of; both as the means of preventing and of curing curvature, when the erect position can be safely sustained. In some cases, where the curvature has been slight, the persons very young, and the general health good, I have succeeded in restoring the natural form, merely by liberating the body from all constraint of stays or monitors, and permitting as much exercise to be taken as could be borne without fatigue.

Balancing any object, however light, on the head, has great efficacy in rectifying the shape of the spine. It is also readily adopted, as a pastime, by young people. In some instances of spinal curvature, where there was not a softened state of the bones, I have tried, with the best effects, exerting the muscles of the back, by the carriage of a bag of sand on the head; employing, at first, short periods of time for the exercise, and allowing rest in the intervals, in the recumbent posture; and, as the strength increased, repeating the exertion more frequently, and continuing it longer.

I have every reason to believe that this treatment, if employed with proper caution, will be always useful in cases of curvature from weakness; and, if practised with assiduity during early

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* I do not apply these observations to curvature from carious or ulcerated vertebræ, nor do I intend to enter into the consideration of that disease at present; there being no difference of opinion, with medical men, respecting the propriety of treating it by rest and external stimulation.

† It occasionally happens that strong and labouring people acquire some lateral inclination of the body, and a projection of the shoulder-blade, in consequence of employing one hand almost exclusively in their work. I have observed, in these cases, that the shoulder which is the least exercised, is the one that stands out, whilst the other is apt to be peculiarly well formed; a fact which corroborates the principles laid down in the preceding part of this Paper, and suggests the propriety of teaching young people, as much as possible, to become ambidextrous.

youth, I am persuaded would be the best means of preventing distortion.

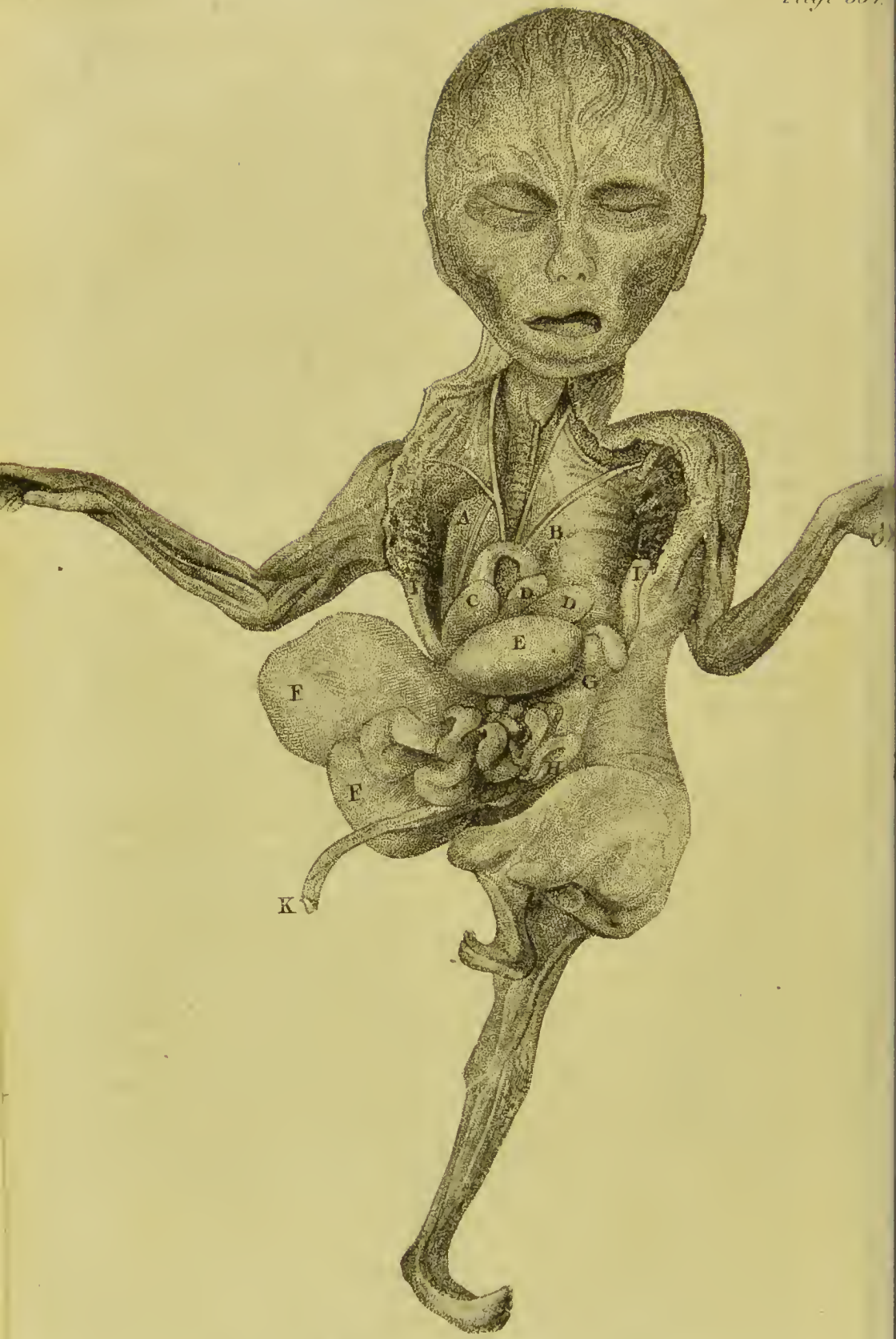
The means which are most beneficial where merely the shoulders are round and prominent, are skipping with a rope, and the use of the dumb-bells; particularly in the action of carrying them backwards, which exerts the flat muscles that lie between the shoulder-blades and the spine.

I shall conclude by observing, that in all cases where a curvature of the spine, from a softened state of the bones, is apprehended or has taken place, every endeavour must be made to improve the health and strength, by a purer air, tonic medicines, and the cold bath; without which, machinery and rest will be useless, and exercise hurtful.

Some situations are much more productive of a disposition to curved spine than others. In certain districts of England and Holland, it is found to prevail. In the neighbourhood of Leyden, I observed great deformity of the spine to be almost universal with the women, and to exist even frequently in men. Damp and low situations would seem to have a peculiar tendency to induce a softened state of the bones.

With respect to medicines, it is generally known that preparations of iron are the best tonics in this disease. In the employment of the cold bath, I have found great advantage from having it used in the manner of affusion; not only in cases of weak spine, but whenever the object was to restore strength, and increase the activity of the circulation. I have also employed the affusion of tepid water, with very marked benefit, in cases where, either on account of the season or other circumstances, the dashing of cold water over the body would have produced too great a shock.

If the person be young, and the curvature not of very long standing, although it may have produced great deformity, there is no reason to despair of a perfect recovery. As long as the growth of the body is going on, there is a considerable tendency in all the parts to return to their destined form and uses, when placed in proper circumstances, and when the actions of the vascular system are vigorous and healthy. Thus we find even fractured and dislocated bones make great advances, in young people, to their original figure or situation. The gradual reduction and shaping of the osseous case in necrosis, also belong to the same law of the animal economy.



Case of Fœtal Malformation.

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Art. II.—*A remarkable Instance of fatal Malformation.* Communicated by J. C. Yeatman, Esq.

[With an Engraving.]

Many instances of fatal malformation are recorded in the fifty-one volumes of this truly valuable Journal. Among others are the following:—A fœtus with one eye in the forehead, another without a head; one without a brain, another without a bladder; one without a heart, another without arms or legs; one which had neither head nor heart, another with the placenta attached to the head; one with a tumor as large as the head, another defective in the brain and spine; one found in the body of a youth, another in the urinary bladder; one in the abdomen of a woman, eighty-three years of age,—another, in an ossified state, in a woman sixty years old; one in which all the viscera were double, another in which the viscera were upside down; one in which the viscera belonging to the right side of the thorax and abdomen were found in the left, and *vice versa;* and, lastly, not to multiply more instances of malformation, one born without abdominal muscles, the viscera being exposed to view. This last mentioned is described by Mr. Humby, in the third volume, page 137, in a communication dated St. Albans-street, January 15th, 1800; and it is stated to be in the museum of Mr. Heavyside. I allude to it in this place, because it bears some resemblance to the one now under the inspection of my friend, Dr. Edward Seagrim, (of Bratton, Wilts,) and myself; but, as there is a striking difference between them in the relative situation of several of the viscera, and in there being no diaphragm in the fœtus to be described, I beg leave to add it to those already recorded, leaving the causes of such phenomena to be explained by future physiologists.

A. W. miscarried, about the fourth month of utero-gestation, of a male fœtus, which presented the following appearances:—The heart, left lung, liver, stomach, spleen, kidneys, and the intestines down to the sigmoid flexure of the colon, are connected to each other and to the spine, by a duplicature of peritoneum. There are no abdominal muscles or integuments, except a very small portion on the left side. The above viscera are bounded by the thorax, loins, and pubes, where the integuments are rounded off, and where they circumvent the viscera, describing a circle round them.

The heart lies in an investment of peritoneum, in the right hypochondriac region, immediately above the convex surface of the larger lobe of the liver; its apex resting on the stomach, near the pylorus, and its margo obtusus lying in contact with the left lung.

The left lung, which is particularly small, consists of two lobes, lying in the epigastric region, over the lesser curvature of the stomach; its smaller lobe touching the heart.

The stomach occupies its usual situation. The spleen is connected to the stomach at its large extremity. There is no appearance of omentum.

The liver, consisting of two lobes, is unusually large, covering the stomach, spleen, kidneys, and most of the intestines; but in the Plate it is thrown aside, its concave part being uppermost, in order to bring the viscera into view. The convex surface of the larger lobe of the liver is bound down to the integuments, near the right hypochondriac region, by a broad and strong duplicature of cuticle.

The left kidney is situated below the spleen and the larger curvature of the stomach, deriving a cuticular covering from the integuments of the left side and loin, which is blended with, and lost in, the peritoneal coat of the intestines.

The right kidney is situated between the fœtal extremity of the funis, and the duplicature of cuticle which binds down the larger lobe of the liver.

On opening into the thorax, no diaphragm is perceivable.

The right lung, which consists of one lobe, occupies its usual situation, while nothing is contained in the left cavity of the thorax, and that cavity is much narrowed by a lateral incurvation of the spine.

The aorta, trachea, and œsophagus, lie on the right of the incurvated spine.

The distribution of the blood-vessels is natural, with the exception of the superior cava, which passes to the right auricle of the heart, over the right lung, throughout the full length of that organ.

The left extremity reaches half-way down the thigh of the right. The left thigh lies over the inguin, and is bound down by integument to the pubes. The heads of the tibia and fibula are connected to the inner condyle of the femur, passing from thence at a right angle; so likewise the astragalus, with respect to the internal maleolus.

A. W. states that, about a fortnight after conception, while walking through a lane, a cow broke through a hedge into the road, close to her; which so frightened her, that she ran a short distance, and jumped into a dry ditch, remaining there till the animal was out of sight.

My senior apprentice, Mr. Miles, who very properly treated the case of A. W., informs me, that the funis and placenta were natural.

It is my intention to deposit the fœtus in the museum of the Royal College of Surgeons.

Description of the Plate.

A. Right Lung, with the superior cava passing over it.
B. Incurvated Spine.
C. Heart.
D, D. Left Lung.
E. Stomach (inflated), and Spleen.
F, F. Liver.
G. Situation of the left Kidney, and the boundary of the integuments of the left side and loin.
H. Sigmoid flexure of the Colon.
I, I. Points at which the integuments terminated, superiorly and anteriorly, and which, previous to opening into the thoracic cavity, were joined together in the situation of the xyphoid cartilage, and immediately over the arch of the aorta.
K. Funis.

Frome, Somerset; September 21st, 1824.

Art. III.—*On Hernial Protrusion.* By Dr. Kinglake.

A protrusion of portions of the intestines and omentum separately and conjointly, is a morbid occurrence sufficiently frequent and important to require watchful and seasonable attention. Strongly pressed as the contents of the abdomen are against its parietes under violent muscular exertion, much risk must necessarily exist on these occasions, of the more yielding parts of the boundary giving way to such protruding force. When it is considered that the regions occupied by the visceral organs are so completely filled as not to leave the smallest vacant space that could be justly regarded as a positive cavity, it is easy to perceive the extent of liability attaching to parts so compressed, for being occasionally forced beyond the natural limits so as to produce hernial disease.

It is a fact no less true than interesting, that the animal frame is universally constructed of what may be considered as mathematical cavities; but that the exigencies of the living state fill up and obliterate every area or hollow throughout the whole system, giving tone and solidity to every part of the fabric. It is obvious that the functions of life could not be performed without this universal contact of surfaces, by which the contiguity and mutual slidings of membranes are furnished that are essential to animal existence. It is this animal plenitude that subjects more particularly those parts of the abdominal viscera that are situated near the apertures that have been naturally provided as necessary outlets from the abdomen, to be casually forced in a line parallel to these openings beyond the bounds of that cavity. Seeing therefore the physical aptitude for

hernial occurrences in the natural structure and functional conditions of life, it is an object of importance to be possessed of adequate means for relieving those ailments under whatever variety they may be presented.

The varieties of hernial disease have been usually comprised and enumerated under the several denominations of inguinal, scrotal, femoral, and umbilical, referring to the different situations in which they respectively appear. The prolapsed part in the two former, descends through the same aperture, taking a higher or lower position in the same channel. The femoral hernia is constituted by the protruded part passing under Poupart's ligament, in a line with the femoral artery, and other vessels proceeding from the cavity of the abdomen along the thigh in that direction. The umbilical variety of hernia is a protrusion of intestine or omentum, or both, by the side of the umbilicus or navel, formed by obliterated fœtal vessels, through which a vital communication was held before birth with the circulating fluids of the mother.

In all those various situations, a portion of intestine, with or without omentum, may by violent exertion of the abdominal muscles be extruded beyond the cavity of the belly, and may there, by the gradual enlargement of the prolapsed part, become painfully compressed, dangerously inflamed, and destructively gangrened. In intestinal hernia the obstruction to the passage of the contents of the bowels through the area of the prolapsed part may be so complete as almost necessarily to destroy life, either by the permanency of the obstacle to fœcal discharges, or what is more common, the production of sphacelus.

The danger of life in all the hernial varieties is considerable, but more especially imminent in those of the inguinal and scrotal description. The aperture through which the protrusion has been effected in those cases, being narrower than in the others, and the consequent constriction being more severe. But the destructive condition of the disease is induced by the relative size of the protruded part with that of the opening through which it has passed, occasioning a proportionately greater or less difficulty in returning it into the cavity of the belly.

As hernia in every variety is constituted by a prolapsed portion of intestine or omentum separately or conjointly, through a tendinous and an unyielding opening, the attendant danger must in every instance be estimated by the bulk of the extruded part, and the severity of the stricture by which it is confined. In intestinal hernia, the size is chiefly made up of air, the rarefaction of which causes a distending expansion that is often acutely painful, and which greatly augments the difficulty and eventual uncertainty of the case. No time should be lost, under these formidable circumstances, in endeavouring

to return the hernial protrusion into the cavity of the abdomen. This is the grand curative object, to the accomplishment of which, all remedial means should be assiduously directed; and those which will prove most promptly effective, with the least concomitant pain, are surely the most eligible, and should be unhesitatingly preferred.

The taxis (as it has been quaintly termed) is usually subjected to trial more or less patiently and perseveringly, but unhappily with a result very far indeed from having been uniformly successful. The instances of failure are numerous, and the delay and hurtful violence arising from the protracted and fruitless endeavour to render the needful relief, are often among the most aggravated and irreparable circumstances of the case. If inflaming violence be used in addition to the natural proneness to inflammation, or to its actual existence, the united mischief inflicted on the prolapsed part must be of a very serious nature. It is in this state that the operation for liberating the hernial stricture is commonly resorted to; but the chance of success under such circumstances is too distant to be either gratifying to the operator or encouraging to the patient. The necessary relief should be afforded with the least possible delay and in the most effectual manner; which may be accomplished either by speedily replacing the hernial protrusion by the hand or by dividing the abdominal ring or dilating the aperture sufficiently to at once disengage the confined part and to admit of returning it securely into the cavity of the abdomen.

The mode of rendering the assistance, which it is the object of this paper to recommend, is that which has succeeded in six instances out of seven, and that too within ten minutes after commencing the trial. The principle of the treatment is founded on a leading and characteristic feature of the disease and of the practical difficulty with which its remedial means are closely connected: it is that of the contained air in the protruded intestine inflating and distending the prolapsed part to an extent that renders it too bulky to admit of its being returned through the unyielding or undilatable opening by which it has passed. What therefore should be attempted? Most certainly to diminish the flatulent distention or bulk as much as possible, so as to bring it within the area of the opening through which it is to be replaced.

This great remedial object may be effected by reduced temperature, topically applied through the medium of the coldest water that can be procured. Its sudden application by means of cloths dipped into that fluid, and renewed every two or three minutes during about half an hour will have the effect of so far abstracting heat from the hernial parts as to cause a perceptible diminution of the swelling. This is produced by the condens-

ing influence of cold on the rarefied state of the air contained in the prolapsed portion of intestine.

When this diminution has been produced, the endeavour should be commenced to return the hernial tumor, and the mode of attempting it should be by pressing steadily but forcibly at the basis of the swelling, with a view to insinuate as it were a small portion of the air lying nearest to the hernial aperture in the first instance. This incipient step to ultimate success may with suitable management be soon effected, when the remainder will follow with the containing portion of intestine, and in passing the aperture will enter the cavity of the abdomen often with an audible report, and always with a jerk, not less satisfactory to the practitioner than gratifying to the patient. In all the instances in which this mode of relief has been pursued no subsequent inconvenience occurred; the bowels soon became with the aid of aperient medicine sufficiently active; the previous vomiting ceased; and complete recovery was the happy result.

Four of these cases were inguinal hernias, one scrotal, and the other umbilical: in each the same treatment was equally availing; and such was its efficacy as to leave no reasonable ground to doubt but equal success would with similar management attend the practice of others, and prove it to be an adequate remedy for a very afflicting and most menacing disease, with the ulterior practical advantage, that if it should not succeed, it would rather have improved than injured the prolapsed part for being ultimately liberated by instrumental assistance. The anti-inflammant influence of topical cold here, as on numerous other important occasions, would be beneficially exerted in preventing or repressing inflammatory action and thus obviating the additional difficulty that would attend cutting into and exposing parts suffering under that morbid state of excitement.

My experience warrants me in regarding it as correct practice to persist during one hour if previous relief be not obtained in the topical application of cold water, renewing it every two or three minutes by means of cloths wrung from that fluid, and following each time of applying it with a fresh attempt to return the protruded part; when, if there be no probability of succeeding, the operation should be immediately resorted to, before a dangerous state of inflammation would be likely to supervene.

In the only case in which topical cold did not render a reduction of the hernia practicable, the operation was performed without delay, the abdominal ring dilated, and the incarcerated intestine released and restored to the cavity of the belly. The patient having suffered no unnecessary delay or unavailing violence in attempting to effect a return of the prolapsed part,

rapidly recovered without an unfavourable symptom, and afterwards remained permanently well.

My observation of hernial disease has been sufficiently extensive to justify me in fully believing that a correct adoption of the practice here proposed for its relief will rescue an incalculable number of sufferers from impending danger; and if it should fail in seasonably removing the constriction, it will render the operation as a measure of dernier resort, far more safe and effectual than it usually is after the indefinite delay and inefficiency attending the prevailing mode of treatment.

The attempts that are usually made to return intestinal hernia are worse than useless in aiming to effect what is often utterly impracticable. To endeavour to force into the cavity of the abdomen through a definite opening, a bulk much too large for its dimensions, is to grapple with an impossibility. The superior efficacy of topical cold in facilitating the reduction of intestinal hernia arises from its two-fold influence in condensing the rarefied air below the stricture and imparting to it a density or resisting power that renders it capable of being wielded and pressed with a wedge-like force against the abdominal aperture. Rarefied air is too unresisting to be thus acted on and is in that attenuated state very generally an insurmountable obstacle to the replacement of hernia. The rationale of the practice is therefore clear and cogent enough to authorize its confident adoption.

Taunton; July 22d, 1824.

*** In complying with Dr. K.'s request of inserting these corrections here, instead of at the end of the Number, we must be allowed to say, that the inaccuracies arose from the difficulty of decyphering his writing.

Page 291,	line 7th,	*for* ordonnances,	*read*	ordinances.
— 292,	— 15th,	— dependent,	—	deficient.
— 294,	— 9th,	— smoothness,	—	smallness.
— 295,	— 25th,	— recurred,	—	occurred.

Art. IV.—*Cases of Neuralgia.* Communicated by Dr. Vandeburgh, of Liverpool.

Mr. W. P., ætatis thirty, consulted me on the 24th of January, 1824, labouring under severe attacks of neuralgia. He stated having suffered from the complaint upwards of two years; that he had tried an endless variety of medicines; had applied both leeches and blisters, and still continued taking the pulvis valerianiæ in large doses, without the most remote relief.

The right side of the face was the part affected; the paroxysms were very acute, and their attacks occurred about noon. On retiring at night, owing to the distracting pains, he was frequently under the necessity of walking about his bed-room nearly throughout the night. The sight of the right eye was

considerably affected during the spasm, and there was an almost constant discharge of mucus from the nostril of the same side. Upon repeated examination, the teeth appeared perfectly sound; and, as his avocations often obliged him to go to and from Manchester, his sufferings were rendered more severe.

I ordered twenty ounces of blood to be abstracted by cupping from the back of the neck, and prescribed the following purgative:—℞. Magnesiæ Sulphat. ℥iss. Infusi Rosæ, Infusi Sennæ, āā ℥iijss. fiat Mistura. Bibat cyath. vinosum tertiâ quâque horâ.

On the 25th, although the medicine had acted very freely, the complaint continued as yesterday; I therefore commenced giving two scruples of the ferri subcarbonas, four times a-day, in some preserved fruit, and desired the patient to abstain from malt and spirituous liquors.

On the 27th, he imagined the pain more severe than ever, and attributed it to the medicine. He sent for me in the evening; and, under the impression that the iron was operating to his future advantage, I urged him to continue the same.

On the 29th, great amelioration had taken place: the paroxysms were less severe, and his appetite (previously much impaired) considerably improved.

On the 30th, my patient slept well, and experienced greater animal spirits than he had done for a long time: the spasms had been, comparatively, but trifling. I increased the dose of ferri subcarbonas to fifty grains four times a-day.

On the 1st of February, he felt but little or no pain; had resumed his accustomed diet and wine, and went to Manchester. He returned on the 4th; had suffered no attacks during his journey, and felt perfectly restored. He continued the iron for some time afterward, with the addition of a small quantity of the pulv. rhubarb, to keep the primæ viæ regular.

I met him a few days since, on his return from the continent, and he has experienced no relapse of his truly distressing and most painful complaint.

Mr. E. S., ætatis twenty-nine, (November 22d, 1823,) stated that he had suffered occasionally from the most exquisite pain on the left side of the face, but more especially over the orbit of the left eye, which very considerably affected his sight. The spasms attacked him suddenly, and with such severity, that for the time he was compelled to relinquish his occupation. The pain was at one time attributed to a carious tooth, for which anodynes, accompanied with copious bleedings, had been prescribed, and ultimately the tooth was extracted; but no remedy proved availing to remove the torture which my patient endured. The paroxysms were generally aggravated at night.

I began to prescribe the ferri subcarbonas, in doses of half a drachm three times a day, mixed in some conserve, and in-

creased the quantity to two scruples. On the 5th of December, the complaint was entirely removed; since which time, however, he has experienced a very slight attack, but which was immediately banished by having recourse to the same remedy.

I beg leave to mention, that the first time I prescribed the subcarbonate of iron, was for a lady from Edinburgh, in December 1822, who had suffered, for a considerable period, most severely from tic douloureux. I prescribed the medicine in doses of twenty grains three times a-day; and she left Liverpool in a very improved state, promising to acquaint me with the progress of her cure; but I have not heard of her since.

I hope you will allow me the present opportunity of thanking Mr. Hutchinson for the publicity he has already given to the world, of his very successful mode of treating the various modifications of neuralgia; and also for his liberal promise of communicating to his brethren the results of his future experience on this interesting subject.

Liverpool; the 20th Sept. 1824.

Art. V.—*Observations on* Mr. Earle's *Fracture-Bed, &c.* By E. Harrold, Esq. Surgeon.

At page 12, No. 17 of the Old, or No. 1 of the New Series of the Medico-Chirurgical Review, in the analysis of Dr. Ollivier's work on *Diseases of the Spinal Marrow*, the Reviewers have referred to my case of Fractured Vertebræ; and, as there is some error in their statement, which may affect the view of these important and interesting cases, allow me just to set the matter right.

My patient did not die from a disease of the *sacrum*, over which the slough had been situated; but from a disease of the *ischium*, produced by his bruising the integuments covering the tuberosity of that bone, in daily letting himself, unassisted, down stairs, long after the union of the fractured vertebræ, and the perfect and permanent cicatrization of the wound over the sacrum. (See *Medical and Physical Journal*, vol. 26, p. 371.)

Your account of Mr. Earle's "Practical Observations in Surgery," and the accompanying wood-cut of his Fracture-bed, contained in the Medico-Chirurgical Review, excited my curiosity to see the original work; which, I am free to confess, surprised me exceedingly.

I shall be as brief as possible in what I have to say, that I may not occupy too much space in your valuable book, or too much of your readers' time; but I am obliged to take some notice of this publication, in common justice to myself, and because I think I have long since proved that some of the author's practical observations are erroneous.

It will, I think, be sufficiently obvious to most of your readers, (if they will do me the favour to refer to the 15th volume of the Medical and Physical Journal, page 8,) that "the plan," which, he says, "he has now the honour to submit to the profession," has in reality nothing new in it; and that it has been almost entirely taken from my fracture-machine, or bed,—a drawing and description of which they will find at the place referred to. It is not a little curious, too, that the ground of argument in support of the method of treatment is almost literally the same as mine; and be it remembered that my communication to that Journal is dated 25th October, 1805.

A year and a half after this, (viz. 6th April, 1807,) a letter was published by Sir James Earle, giving an account of a fracture-bed invented by his son, and the history of a case where both thighs were fractured; a parallel case to the one which led to the invention of mine.

It is curious that even here the argument is so similar to mine, (see Sir James Earle's Letter, page 11,) that the first idea would be, that my Paper had been previously read by the writer. Under this impression, and observing that no notice was taken of my bed, ("Ad ogni uccello, suo nido è bello,") I wrote to Sir James Earle, complaining of the neglect; from whom I received the following letter. The original is now before me.

"Sir,—The construction of the bed, an account of which you say you have seen, entirely originated from the desire my son felt to give relief to the poor fellow, who was the subject of the case related in the same pamphlet. It was entirely his own invention; and I was much pleased with the ingenuity and utility of it. I added the bar to it, which I conceived would make it more extensively useful. I shall order my bookseller to send me the volume of the Medical and Physical Journal you mention, as I have not yet seen it. As your account which you mention of your machine has appeared so long since, I should be surprised that is not more in use; but that I know, and find, that what is not wanted in families every day is disregarded.

"It is surprising that the bed-ridden have been so long neglected.

"I have the honour to be, Sir, your most obedient servant,

(Signed) "JAMES EARLE."

"*Hanover-square; 9th January,* 1808."

"Since the above was written, I have seen both your accounts of your contrivance: it appears very ingenious, but, as you observe, much more complicated than my son's.

This letter places the fact beyond all reasonable doubt, that Mr. Earle must have seen, about that time, the account of my apparatus; and, after a lapse of fifteen years more, he publishes—what I think most unprejudiced and competent observers would consider *my* invention, as his own. He has, indeed, made some alterations.

I, too, have made great improvements, as I think, in mine, but *without altering the principle*, and which greatly simplify the application, and increase the power and accommodation of the instrument.

My first invention, however, not having been "rewarded by the Society of Arts, &c. with their large gold medal;" and not, so far as I know, having excited the attention of surgeons generally, till Sir Astley Cooper did me the favour lately, in his work on Dislocations and Fractures, to mention my case of fractured spine. My first invention not having produced much attention, "neither pride nor modesty" would permit me to make any more attempts to call it forth; or I should long since have had great pleasure in communicating my improvements to the medical world.

Having so far done justice to myself, or at least given the profession some opportunity of forming an opinion upon the subject, I now come to the investigation of some of his "Practical Observations." Mr. Earle observes, that "the principle of the double inclined plane is excellent, and, with certain modifications and additions, it will probably be found the most eligible mode of treating all fractures of the thigh."

Had he taken the trouble to look at page 121, vol. 26, of the Medical and Physical Journal, he would, perhaps, have entertained some doubt of the truth of this position: he would there have found a diagram explaining, as I think, pretty clearly, one description of fractured thigh, in which the use of the double inclined plane would most likely prove injurious, notwithstanding what is afterwards advanced in the same paper. The diagram shows that, when the fracture is in the shaft of the bone, within a certain distance of its lower extremity, if the fracture be not in a direction for the lower fractured portion to rest *upon* the upper,—i. e. if the fracture, for instance, be oblique, and upwards and backwards, when extension is made by pressure upon the calf of the leg, the action of the extensor muscles of the leg upon the patella *will occasion a depression of the lower fractured portion of the bone.*

The diagnosis, when the patient is placed upon the double inclined plane, is extremely obvious; the patella of the fractured limb is much less prominent than the other, and the depressed extremity of the bone may be *felt* in the ham, when any extension has been employed, between the *flexor* tendons of the leg. (See *Medical and Physical Journal*, vol. 26, page 121.)

Mr. Earle says, page 133, that he has not found it necessary to use any splints even in fractures of the shaft of the bone; but, if requisite, they may be added. The fact is, that Mr. Earle's alteration of my bed has made it no easy matter to apply splints to any purpose: he is therefore content, if possible, to do

without them. Splints form an essential part of my fracture-boxes, are manageable with the greatest ease, and are of important service.

There is not unfrequently, in fractures above the middle of the bone, a tendency to incurvation at the knee, which lessens the proper coaptation of the broken parts of the bone. This is best managed by an additional small cushion of wool, between the inside of the knee and inner splint; and another above the fractured part, between the thigh and outside splint. Splints also support the limb through its whole extent, from the knee to the great trochanter; for, when the outside splint is applied to the other thigh, a strap across from one outside splint to the other, by acting upon the upper portion of both thighs, becomes a sort of pelvic bandage, affording the best means of perfect coaptation in cases of fracture of the cervix femoris; and, if boney union in fractures within the capsular ligament be in the power of nature, this will, in the best manner, assist her operations.

Whenever a splint upon the upper surface of the limb may be found necessary, the same straps and buckles which fix the lateral splints will fix this. The limb, thus inclosed, is kept so steadily to its proper position, as to diminish the pressure upon the calf of the leg, the part most likely to be uneasy.

With regard to complexity, (see "Practical Observations," page 103,) I do not see how a variety of positions, and the necessary accommodation which great differences of length and bulk require,—from seven years old to the largest adult size,—can be well ordered without a complex instrument, or that there can be any objection to it upon this account—*if it work well.* Few contrivances are more complicated than a watch; and, if one be required to keep good time, of course it must be more expensive than a less perfect and less useful machine.

Cheshunt, Herts; 23d August, 1824.

ART. VI.—*A Case of Hernia, in which the Operation of Taxis was rendered efficient by a new Mode of performing it.* By WILLIAM BALFOUR, M.D. of the University of Edinburgh.

CERTAIN general principles, the result of accumulated observations and experience, are necessary to direct the physician and surgeon in the application of the means he employs in the cure of every case of importance that comes under his care. Without such aid, no individual mind could embrace, no individual could retain, the innumerable forms in which disease presents itself, and the consequent variety of remedies, and necessarily varied modes of applying them. Necessary, however, as theory

is in the practice of the healing art, sufficient scope is left to the genius, the resources, and discretion, of every practitioner. No set of rules will apply in every instance, and cases but too frequently occur, in which the ordinary routine is altogether inefficient. In such emergencies, if experiments can be made which promise some advantage, without increasing the risk of the patient, it is the duty of the practitioner to make them; and, if productive of the desired effect, they add new facts to the stock of human knowledge. It is in this way alone that an experimental science can be advanced;—it is in this way that the practice of medicine and surgery has been improved.

The rules laid down by authors for conducting the operation of taxis, are not precisely the same. The difference, however, between the latest and best writers is more in appearance than in principle; complete relaxation of the parts affecting the aperture through which the bowels protrude, being the object of all the variety of directions for position of the body.

Winslow directs the body to be placed on an inclined plane, the thigh being bent towards the trunk. Sir Astley Cooper advises the same. Mr. Samuel Cooper directs the thorax to be elevated, and turned towards the opposite side, and the thigh to be bent and rotated inwards. Mr. Hey says, "the patient should lie on the side opposite to that affected by the hernia; the abdominal muscles being relaxed by bending forwards, and the thigh brought to a right angle with the trunk." Mr. Benjamin Bell recommends a mode of proceeding very different from any of those now quoted: he says, "the patient should be placed almost perpendicularly upon his head;" and that placing the patient's feet over the shoulders of another person, while at the same time his body is allowed to hang downwards, and causing him in this posture to be a good deal jolted about, has on some occasions been known to answer, when every other means has been tried in vain. "This position," says Mr. Bell "causes almost the whole quantity of intestines to hang or swing by the protruded parts." And a most efficient mode this would be, were it at all practicable; but if relaxation of the femoral fascia, of Poupart's ligament, of the abdominal muscles and ring, of the internal iliac and psoæ muscles, facilitates the reduction of femoral and inguinal hernia, then Mr. Bell's method must be the very worst that can be adopted. In the posture he recommends, these parts must be more upon the stretch than when the patient stands upright upon his feet. "Suspension," says Mr. Hey, "over the shoulders of an assistant or two has been thought to favour the reduction considerably. I have tried it often; but, having found it inefficacious, I have now for many years laid it aside."

Taxis consists in placing the body in a proper posture, and

applying gentle pressure to the tumor, in the direction in which its contents protruded.

In the month of August, 1814, I was called to Mr. Samuel Malcolm, aged twenty-eight, whom I found labouring under symptoms of strangulated scrotal hernia. He had worn a truss for several years, but, the strap having broke, had laid it aside for two days previous to that on which I was called to him; when a hernial tumor, of considerable size, was formed, and refused to recede by the means he usually employed on similar occasions. I found him in bed, on account of a chilliness of which he complained, and general tenderness of the tumor to the touch; pulse natural.

I put my patient in the posture recommended by Mr. Samuel Cooper, and then proceeded according to Mr. Hey's directions, "by gently compressing the neck of the hernial sac, that its bulk might be diminished where the stricture was the greatest; and then pressing the diminished part towards the abdomen." I continued my exertions, with short intervals, for fifteen or twenty minutes, without effect. The patient had now become thirsty, yawned incessantly; and the tenderness of the parts had increased so, that he intreated me to desist.

Finding I could not succeed, and satisfied that the tumor was exclusively intestinal, it occurred to me that, if I could pull the protruded parts downwards a little, inflammation would be retarded, by the constriction being removed to another portion of the bowels; that both constricting and constricted surfaces would in some degree be lubricated; that the distention of the vessel of the incarcerated portion of the gut would be taken off, and consequently its whole bulk diminished; and that the peristaltic motion might be restored: effects, which would all conspire in facilitating reduction.

But is there no injury to be apprehended, I asked myself, from using such freedom with the parts? If resistance, I replied, is considerable, I will desist: if there is little or no obstruction to their further descent, I can do no harm; for inflammation, however imminent, has not yet commenced. Besides, if Mr. Benjamin Bell and Mr. Hey could suspend the whole weight of the intestines by the protruded part without injury, much less risk must be run in applying a power which can be regulated at pleasure. Supporting the scrotum, therefore, in my right hand, and doubling up the integuments with the finger and thumb of my left, I laid hold of the gut, and pulled it gently downwards. Immediately on feeling it yield, I applied pressure upwards as before; when the tumor receded into the abdomen in the pleasantest manner, and with a gurgling noise.

From the date it will be seen that the above case occurred ten

years ago. Indeed, it had entirely escaped my memory, till, rummaging one day among a parcel of manuscripts, it presented itself to my view. I now lost no time in taking the opinion of some of the most eminent practitioners in this city on the subject. Every one stared at mention of the fact, as if he would have said, "How simple the idea! It is astonishing it did not occur to myself." All agreed that it was new, and that it unquestionably superseded the necessity of having recourse to the knife in the present instance. Now, any mode of cure that succeeds in one case may succeed in others similar to it.

As illustrative of the probable advantage to be derived from the fact in question, I would suggest a consideration of the phenomena which primarily occur in hernia. What, for instance, must be the immediate effect of even the slightest circular compression of the intestinal tube? Proportionate distention, certainly, of the vessels below the stricture, or of the isolated portion of the gut. It is very conceivable that cases of hernia frequently occur, in which the protruded parts completely fill the aperture through which they pass, without being sensibly constricted for a considerable length of time; and yet distention of the vessels below the aperture gradually, though imperceptibly, advances to that pitch at which it forms an insurmountable obstacle to the retrocession of the gut. A very slight degree of such distention may effectually preclude success in the operation of taxis. But if, in such circumstances, the stricture can be shifted, as in the above case, to a different portion of the tube, the necessary consequence would be a diminution of distention of the vessels of the isolated portion. If to these are added the other considerations which determined my practice in the present case, they will form a powerful *a priori* argument for its adoption in many cases of daily occurrence. At the same time, I am well aware that the utility of any new fact or practice in medicine and surgery can only be determined by time and experience.

Among others of my professional friends here, I submitted this case to Mr. Liston, surgeon, who, in a letter to me on the subject, was pleased to express himself in the following terms:

"My dear Sir,—I have read your paper on Hernia with great pleasure. The preliminary remarks appear to me most admirable and judicious. The practice is certainly new, and founded on sound principles; but I should doubt the practicability in some instances, and the propriety of it in others. When the prolapsus is recent and the coverings lax, it may prove a very useful proceeding; but experience [an iteration of my own sentiment] must determine the cases in which it is likely to prove beneficial and safe. The doing away with a painful operation is at all times laudable; but, in spite of all our endeavours, I suspect cases will occur in which the knife, early resorted to, will afford the surest and safest relief to the patient."

Thus, Mr. Liston's opinion is, on the whole, favourable to the practice in question. He has his *buts* and his *doubts*, to be sure; which are equally applicable to taxis as usually performed, as with the addition which I made to it in the preceding case. That it may prove impracticable in some instances, and improper in others, may be affirmed, indeed, of any remedy in any disease whatever. General blood-letting may be imperatively indicated in the commencement of fever, but would prove certain destruction in the latter stages.

Mr. Liston admits that "the practice is certainly new, and founded on sound principles;" and that, "when the prolapsus is recent, and the coverings lax, it may prove a very useful proceeding." This is all I contend for,—and it is a great deal: I never dreamt of an alternative to the knife in the advanced stages of incarcerated hernia. At the same time, I think it perfectly logical to affirm that, if the step I have added to the operation of taxis shall be found, even occasionally, to facilitate or render that operation more efficacious, then it may supersede, to a proportionate extent, the necessity of a painful operation, by enabling the practitioner to remove the complaint before it has advanced to that stage in which the knife alone can be of avail to the patient.

Edinburgh; 12th August, 1824.

ART. VII.—*Cases of Cholera, with the Appearances on Dissection. Being an Extract from a Medical Report of the Diseases which occurred in the 16th Lancers, from June to September*, 1823.

CHOLERA.—Five were admitted under this head, and one taken ill whilst in hospital for a contusion: four died. The following are some of the cases, and appearances on dissection:

John Halford, aged twenty-eight; nine months in India; a musician; tall, and spare habit. Felt some sharp griping pain in his bowels at parade, on the morning of the 20th August; was obliged to dismount, but continued on parade until the troops were dismissed. On his return to his barrack, was smartly purged. Stomach sick, which was speedily followed with painful spasms of the abdominal muscles. The vomiting and purging continued incessant; he was quite overcome from the exertion of going to and from the privy, and fainted. In this state he was brought to hospital: thirty ounces of blood were taken away; and a bolus, consisting of one scruple of calomel and a grain of opium, given, and washed down with a draught of fifty drops of tinct. opii, in peppermint water. At half-past nine o'clock, both the vomiting and purging had abated; but the spasms continued, and extended to the gastrocnemii muscles. The pulse could not be felt at the wrist. The

extremities and surface of the body were cold, and bedewed with a clammy sweat; the hands and fingers were shrivelled to an extraordinary degree, and of a pale purple colour; the face and surface of the whole body had a dirty, dark appearance; lips of a deep purple colour; the eyes were sunk into the sockets, and the cornea dull and heavy: in short, the countenance had undergone a most remarkable change, so that a person well acquainted with him could scarcely have recognized him. A full dose of calomel and opium was repeated, and friction with tinct. opii applied to the abdomen and extremities, whilst a warm bath was getting ready. At half-past ten he was put into the bath, and felt almost instantaneous relief from the spasms. There was a tendency to stupor; but he was quite clear and coherent in his replies, when his attention was roused. There was no return ef vomiting or purging, from the time of admission. The spasms were not so severe, but returned frequently. Calomel was given freely, and at short intervals, in the state of powder, with or without tincture of opium and ether, according to the symptoms. A purgative enema, with turpentine, was given; but it produced no effect, and did not come away. Coma increased; he gradually became more and more exhausted, and died a few minutes after two o'clock P.M.

Absence of urgent thirst was the most remarkable circumstance in this case.

He took altogether seven scruple-doses of calomel, with three grains of opium and 160 drops of tinct. opii, and ether ʒjss.

Appearances on Dissection.—Great turgescence of the vessels of the head; slight effusion between the pia mater and tunica arachnoidea, on the right side of the middle lobe of the brain. In the ventricles, an unusual quantity of red serous fluid; and a much larger quantity at the base of the brain, and in the spinal canal.

The lower lobe of each lung in contact with the diaphragm was gorged with blood; the upper lobes were rather collapsed.

The pericardium had an unnatural red hue; the heart appeared small, and felt uncommonly firm, particularly the walls of the left ventricle: it offered great resistance to the scalpel; its texture appeared unnaturally dry and dense. The musculi pectonati were alike firm.

The coronary, and other superficial vessels of the stomach, were injected; but, externally, there was no appearance of inflammation of that organ. There were inflamed patches on different parts of the villous coat; and other parts of it presented an unnatural dark colour, which did not look like the effects of inflammation.

The convolutions of the small intestines showed an inflamma-

tory blush; and the minute ramification of vessels on their surface, injected as they were, had a beautiful appearance.

The liver was uncommonly dark coloured, and its vessels gorged with blood. The coats of the gall-bladder appeared and felt thicker than natural.

There was nothing unusual in the quantity or appearance of the bile, and it flowed without interruption into the duodenum, on pressure being applied.

The porta was much distended.

Thomas Cornet, aged twenty-six years, had been six years in India; was awoke out of his sleep, about twelve o'clock at night, on the 26th of August, by a griping pain in his belly, which was succeeded by purging, vomiting, and spasms in the abdominal and gastrocnemii muscles. He patiently endured his sufferings until three o'clock, when he applied to his comrade, and a *dooley* was sent for, on which he reached the hospital at four A.M. He mentioned that he had been sleeping in the open air, and that he had been in the habit of doing so. The pulse could not be felt at the wrist; the extremities and surface of the body were cold; the purging and vomiting had moderated, but the spasms were very severe in the calves of the legs; thirst most urgent. A vein was opened, but no blood flowed. Opium and calomel were given in large doses. Frictions were used until a bath could be got ready. The first dose of medicine was immediately rejected; but afterwards, although there were frequent attempts to vomit, nothing was brought up, and all the succeeding doses were retained. The purging also ceased; and after six o'clock he suffered only from spasm and thirst. He was perfectly rational in his conversation. He staid only ten minutes in the bath.

At half-past seven A.M. he was drowsy, and appeared under the influence of the opium, but got no sleep. A new source of suffering now came on,—viz. a severe pain along the spine of the back. He continued tossing about, and calling for drink. Every movement he made brought on the spasms in the legs, and in the internal part of the right thigh. He was deaf to all entreaties, and, although perfectly sensible, could not keep quiet, or abstain from drink.

As the disease advanced, the head became more engaged, (perhaps the opium assisted;) he talked wildly, and about eleven A.M. laboured under a degree of coma. The calomel and frictions were persevered in, and a turpentine enema administered, and he had a watery dejection soon after. At three P.M. the stupor had increased considerably; the eyes and countenance had undergone a material change, and he had evidently lost ground. The enema was repeated, and calomel and

frictions continued. He gradually became less sensible to the thirst and spasms. Coma increased, and he died at six P.M.

Dissection.—The scalp bled freely, on being detached from the cranium. All the blood-vessels on the surface and in the substance of the brain were gorged with blood, and there was a slight effusion of blood upon the inferior part of the right middle lobe. There was a great deal of water in the ventricles; it was limpid and colourless.

There was an unusual degree of vascularity both upon the internal and external sheath of the spinal marrow; and this was observable as far as the section was continued,—viz. to the fifth dorsal vertebra. The muscles of the back appeared more like a mass of coagulated blood than muscular fibres, their vessels were so gorged, and bled so freely.

The lungs were in the same state as Halford's; and the pericardium presented a like inflammatory blush, which was more remarkable on the inner surface.

The heart presented an appearance of disease almost indescribable. It seemed enlarged, was flabby, and flaccid in texture. Upon its surface there were many and remarkable morbid appearances, such as dark-coloured dots and blotches, on the right side, near the root of the pulmonary artery. The deviations from a healthy state were equally striking in the interior. Perhaps it would not be out of place to remark, that the man had been dead eighteen hours before dissection; whereas the former (Halford) had been dead less than four hours.

The convolutions of the small intestines presented exactly the same appearance as in Halford. The superficial vessels of the stomach were not unusually full; but, on raising it up, there was an appearance of increased vascularity internally, and the villous coat was found inflamed in several distinct patches; the intermediate spaces of an extraordinary dark colour. There was a quantity of calomel adhering to different parts of it. The stomach was not much distended, and principally contained the drink taken in; but the duodenum contained a thick fluid, of a dark and extraordinary colour, resembling hydrargyrum cum creta suspended in a thick fluid.

The liver appeared healthy; the gall-bladder moderately distended, and the duct pervious. The porta not much distended, as usual, and its blood appeared very dark and muddy. The spleen was very flaccid, and not of healthy structure.

It has been remarked above, that the dissection of this man was necessarily delayed till eighteen hours after death. The state of the body did not support the opinion that putrefaction sets in at a very early period in this disease: perhaps, the flaccidity of most of the viscera, which has been remarked, might in some degree be attributed to it; but the brain, which usually changes first, was in good preservation, and firm in texture.

ART. VIII.—*Case of Hydrophobia.* By J. ROBINSON, Esq. Surgeon, 16th Lancers.

THE subject of this case was twenty-three years of age, and newly arrived from Europe. He was bitten by a dog supposed to be mad, about seven o'clock in the evening of the 17th May; being in a state of intoxication at the time. Two fangs perforated the back of the right hand: one between the metacarpal bones of the ring and middle fingers; the other between the metacarpal bones of the middle and fore-finger.

Bleeding was promoted by warm water, and the potassa fusa freely applied. There was not much tumefaction or pain. The sloughs came away on the 4th June. He was purged, and put on the use of mercury: the system was soon affected; his throat became sore, and his general health a good deal impaired. The mercury was continued twenty-one days, but his mouth continued sore for many days after. On the 15th June, the wounds were healed; appetite and general health good; was discharged in good health on the 27th June.

It has been remarked, that he was intoxicated at the time he was bitten; nevertheless he evinced much concern for the consequences that might result from the accident. He was of a serious turn of mind, and one on whom such an accident was likely to make a strong impression.

He returned to the hospital, at six o'clock on the morning of the 18th of September, up to which period he had continued to do his duty. Said that he had felt very ill since the preceding evening, with a feeling of cramps in his stomach, bowels, and limbs; had drank to excess on the 16th, but did not attribute his illness to that circumstance; and said that he was quite sure it was the bite of the dog that was "coming against him." Pulse was frequent, tongue foul, skin moist, slight thirst, bowels confined. Was ordered a draught of infusion of senna and salts, which he could not be persuaded to take, and evinced a tendency to convulsions when it was presented to him: the same occurred frequently through the day. Had three dejections. Pulse fell to sixty-six, and soft; skin moist; tongue foul; said he had no thirst.

At nine P.M. symptoms were of a more decidedly hydrophobic character: the convulsive efforts were more frequent in their recurrence, and respiration was difficult and oppressed. Twenty-four ounces of blood were taken away, in hopes of giving temporary relief; but the convulsive paroxysms returned with increased severity, even during the operation of bleeding, and the breathing was not in the least relieved. An opiate draught was attempted to be given, but he could not be persuaded to swallow it; and he entreated to be let alone, as the bare men-

tion of drinking, he said, would drive him into convulsions. He had no thirst; the paroxysms recurred with greater frequency and increased severity; and he expired, quite exhausted, after a very severe fit, a few minutes before five o'clock on the morning of the 19th September.

Dissection.—Some of the smaller arterial ramifications on the surface of the pia mater were beautifully injected; the vessels within the substance of the brain were also injected. The right lateral ventricle contained a very considerable quantity of fluid, perfectly limpid; the left contained much less; in the two there were probably three ounces. The minute ramifications upon the cerebellum were a good deal distended; as were the vessels on the pons varolii and upper part of the spinal marrow.

The sheath of the spinal marrow appeared unnaturally red along the dorsal vertebræ; and, on laying it open, the spinal marrow was observed to be unusually vascular. At the upper part of the cord, there were a number of minute vessels gorged with blood; but the lower presented more an inflammatory blush, the vessels not being so distinct, and the red tint more equally diffused. On the sheath being detached, there were observed several bits of a white substance adhering to the tunica arachnoidea, which possessed a considerable degree of firmness: they were generally of a circular or oval form, with serrated edges, as if the process of absorption had been going on.

The œsophagus and larynx were not inspected. The stomach showed some marks, but faint, of extensive inflammation; it was highest at the cardiac extremity. Many parts of the small intestines were slightly inflamed, particularly about the termination of the jejunum and middle of the ilium. The cœcum and right extremity of the colon were much distended with air; but the transverse and sigmoid arch, and rectum, were very much contracted.

Art. IX.—*Observations on Fumigation as a Therapeutic Agent.* By J. Green, Esq.

I am induced to offer you a short communication on the employment of the various fumigations, resulting from my experience since I adopted their administration as a branch of practice in Bury-street. I do not yet feel authorized to acquiesce with what has been so strenuously advanced by the continental writers, in favour of this remedy. Perhaps this may be owing to the inattention or reluctance with which some medical men in this country have regarded the subject, and from the imperfect trials which others are induced to give it.

This mode of bathing generally requires perseverance, and, like other baths, too, the benefit derived is not evinced until

some time has elapsed after their discontinuance. In some instances, however, the contrary is the fact, and its agency has been so immediately beneficial, as to occasion surprise both to patient and physician; and, in other cases, not evidently dissimilar, its effects have not been shown so speedily.

Fumigations, though originally intended for the cure of diseases of the skin only, have, by subsequent experience, been found equally efficacious in a multiplicity of complaints, varying much in their nature, principally chronic; but of late acute diseases have been submitted with success to this remedy. In such cases, however, this being an exciting agent, previous depletion and medical treatment is indispensable. In chronic cases, it is frequently relied on alone: nevertheless, appropriate medicines, conjointly used, never fail to act with more certainty, even in smaller doses, and materially expedite the cure. The patients hitherto received here have been almost exclusively those of my medical friends, who have conducted the medical treatment: others have been placed more immediately under my own care by those friends, many of whom are ready to testify, that, when this remedy is properly administered, persevered in, and assisted by the usual adjuncts, that to speak of it in terms of moderation only, would be unjust.

Passing over skin-complaints, where the advantages cannot be denied, their usefulness in no cases have been more satisfactorily evinced than in congestions of the viscera, as in torpor of the liver: here the chlorine fumigations have been of most decided advantage; their superiority over the nitro-muriatic acid bath will not admit of dispute. This is borne out, too, by a very able work, lately published, see "Researches on Chlorine," by Wm. Wallace, of Dublin, who, in some obstinate skin-diseases, is inclined to give it the preference even to sulphureous fumigations. As far as my opinion goes, I have thought the occasionally substituting one for the other has been attended with the same good effects, as surgeons frequently experience by alternating the use of escharotics to an ulcer.

In cases of visceral obstruction or congestion, the relief obtained may be accounted for, from the increased flow of blood which the temperature of the bath is brought to circulate in the extreme vessels on the surface of the body; and, as this impetus is simultaneously given to the parts internally, local obstruction may be thus overcome. As there is no dense medium in this bath, as is the case in a water-bath, the weight of which, whilst in the bath, is sufficient to prevent the distention of the capillary vessels; an equalization of the circulation is effected, the blood being forced to flow in channels which have, perhaps, been for years with some persons almost impervious, particularly with those who have dry, arid, unperspiring skins.

On the same rationale, too, may perhaps rest a great deal of the benefit that is derived in skin complaints, independent of the medicinal substances used in the fumigation: for the cutaneous surface being by this means forced to assume a new and increased action, is enabled to throw off much by transpiration, that might otherwise be a remote or proximate cause of disease.

Following up a late pathology of rheumatism arising not from an increased action of the parts affected, but from a weakened and distended state of the vessels, this remedial agent must appear obviously advantageous: and that such may be the cause of the disease, no specious arguments are required to prove: witness the frequent turgescence of the vessels of the conjunctiva, the weakened and distended varicose veins in many parts of the body, with many persons; and, when these are situated in places subject to much motion, surrounded by hard substances, bones, tendons, and ligaments, as in the joints, such a view of the cause of rheumatism at least seems reasonable, and is borne out more strongly when it is considered that heat, redness, or inflammation, are not usual marks of rheumatism.

In affections of the lymphatic system, as in scrofulous swellings and ulcers, the principles of fumigation will appear obviously beneficial; so in all other affections depending on a weakened action in the vascular system. Nor is it one of the least boasts of this remedy, that it can be used in cases of extreme debility, as such patients commonly find their health improve whilst using the remedy, but more after a series of them have been taken, and then discontinued. Nor must its sovereign deserts be omitted here, in those troublesome cases the sequelæ of syphilis, or in those arising from the abuse of mercury. Its good effects are not less conspicuous in contractions and enlargements of the joints.

The writer's view in this communication is not so much to particularize the various complaints for which this remedy is indicated, as to point out its usefulness in a multiplicity of chronic and anomalous diseases, which are usually baffling to medical men, and where such simple, though important, means hold out a fair promise of a more successful mode of treating such complaints: at least, it cannot be denied that it is an additional remedy, at once powerful and simple, that should be added to the usual remedial powers we already possess. To introduce here cases corroborating what has been now advanced, is unnecessary: suffice it to say, they have been the patients of men of talent, and of justly acknowledged professional liberality, and who are disposed to appreciate duly the advantages of this plan of treatment.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

Relating to the History or the Art of Medicine, and the Collateral Sciences.

Floriferis, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ART. I. — *Of Semi-decussation of the Optic Nerves.* By WILLIAM HYDE WOLLASTON, M.D. V.P.R.S.—(From the Philosophical Transactions for 1824, Part I.)

WHETHER we consider the astonishing subtlety of that medium which renders visible to us objects existing at the most immeasurable distances from us, or that delicately constituted organ which, by its general structure, collects the rays of light, and, by a nice adaptation of its parts, concentrates their force on the sentient fibres of the retina, expanded over its inner surface, we can feel no surprise that such great talents should have been devoted to investigate the curious properties of the one, or that the structure of the other should have been examined with so much assiduity.

The keenness of inquiry manifested by the cultivators of anatomy, in observing the most minute parts that have escaped the notice of their predecessors, shows that any addition to the common stock of our information on this subject will be gratifying to a certain portion of the members of this Society, and probably not uninteresting to the Society at large.

It is not my object, in the present paper, to examine either the first effect of the cornea in rendering the rays of light convergent, or the power of the crystalline lens in finally bringing them to a focus on the retina. It is not my intention to investigate whether the adaptation of the eye to different distances is effected by alteration of the form of the lens from its own muscular structure, or by alteration of its place, from the agency of other muscles. Nor do I mean to consider either the *involuntary* motions of the iris dependent on the quantity of light present, or that *voluntary* contraction of it by which we adapt the aperture of the pupil for distinct vision at different distances, limiting thereby, what in optics is termed the spherical aberration of the lens.

The subject of my inquiry relates solely to the course by which impressions from images perfectly formed are conveyed to the sensorium, and to that structure and distribution of the optic nerves on which the communication of these impressions depends.

Without pretending to detect, by manual dexterity as an anatomist, the very delicate conformation of the nerves of vision, I have been led, by the casual observation of a few instances of diseased vision, to draw some inferences respecting the texture of that part which has been called the decussation of the optic nerves, upon which I feel myself warranted to speak with some confidence.

It is well known that, in the human brain, these nerves, after passing forwards to a short distance from their origin in the thalami nervorum opticorum, unite together, and are, to appearance, completely incorporated; and that from this point of union proceed two nerves, one to the right, the other to the left eye.

The term decussation was applied to this united portion, under the supposition that, though the fibres do intermix, they still continue onward in their original direction, and that those from the right side cross over wholly to supply the left eye, while the right eye is supplied entirely from fibres arising from the left thalamus.

In this opinion, anatomists have felt themselves confirmed by the result of their examination of other animals, and especially that of several species of fish, in which it is distinctly seen that the nerves do actually cross each other as a pair of separate cords, lying in contact at their crossing, but without any intermixture of their fibres.

In these cases it is most indisputably true, that the eye upon the right side of the animal does receive its optic nerve from the left side of the brain, while that of the left eye comes from the right side; but it is not a just inference to suppose the same continuity preserved in other animals, where such complete separation of the entire nerve is not found.

On the contrary, I not only see reason, from a species of blindness which has happened to myself more than once, to conclude that a different distribution of nerves takes place in us, but I think my opinion supported by this evident difference of structure in fishes.

It is now more than twenty years since I was first affected with the peculiar state of vision to which I allude, in consequence of violent exercise I had taken for two or three hours before. I suddenly found that I could see but half the face of a man whom I met; and it was the same with respect to every object I looked at. In attempting to read the name *Johnson*, over a door, I saw only *son*; the commencement of the name being wholly obliterated to my view. In this instance the loss of sight was towards my left, and was the same whether I looked with the right eye or the left. This blindness was not so complete as to amount to absolute blackness, but was a shaded darkness without definite outline. The complaint was of short duration, and in about a quarter of an hour might be said to be wholly gone; having receded with a gradual motion from the centre of vision obliquely upwards toward the left.

Since this defect arose from over-fatigue, a cause common to many other nervous affections, I saw no reason to apprehend any return of it, and it passed away without need of remedy, without any further explanation, and without my drawing any useful inference from it.

It is now about fifteen months since a similar affection occurred again to myself, without my being able to assign any cause whatever, or to connect it with any previous or subsequent indisposition. The blindness was first observed, as before, in looking at the face of a person I met, whose left eye was to my sight obliterated. My blindness was in this instance the reverse of the former, being to my right (instead of the left) of the spot to which my eyes were directed; so that I have no

reason to suppose it in any manner connected with the former affection.

The new punctum cæcum was situated alike in both eyes, and at an angle of about three degrees from the centre; for, when any object was viewed at the distance of about five yards, the point not seen was about ten inches distant from the point actually looked at.

On this occasion the affection, after having lasted with little alteration for about twenty minutes, was removed suddenly and entirely, by the excitement of agreeable news respecting the safe arrival of a friend from a very hazardous enterprise.

In reflecting upon this subject, a certain arrangement of the optic nerves has suggested itself to me, which appears to afford a very probable interpretation of a set of facts, which are not consistent with the generally-received hypothesis of the decussation of the optic nerves.

Since the corresponding points of the two eyes sympathise in disease, their sympathy is evidently from structure, not from mere habit of feeling together, as might be inferred, if reference were had to the reception of ordinary impressions alone. Any two corresponding points must be supplied with a pair of filaments from the same nerve, and the seat of a disease in which similar parts of both eyes are affected must be considered as situated at a distance from the eyes, at some place in the course of the nerves where these filaments are still united, and probably in one or the other thalamus nervorum opticorum.

It is plain that the cord, which comes finally to either eye, under the name of optic nerve, must be regarded as consisting of two portions,—one half from the right thalamus, and the other from the left thalamus nervorum opticorum.

According to this supposition, decussation will take place only between the adjacent halves of the two nerves. That portion of nerve which proceeds from the right thalamus to the right side of the right eye, passes to its destination without interference; and, in a similar manner, the left thalamus will supply the left side of the left eye with one part of its fibres, while the remaining halves of both nerves, in passing over to the eyes of the opposite side, must intersect each other, either with or without intermixture of their fibres.

Now, if we consider rightly the facts discovered by comparative anatomy in fishes, we shall find that the crossing of the entire nerves in them to the opposite eyes, is in perfect conformity to this view of the arrangement of the human optic nerves. The relative position of the eyes to each other in the sturgeon, is so exactly back to back, on opposite sides of the head, that they can hardly see the same object; they can have no points which generally receive the same impressions, as in us; there are no corresponding points of vision requiring to be supplied with fibres from the same nerve. The eye which sees to the left has its retina solely upon its right side, and this is supplied with an optic nerve arising wholly from the right thalamus; while the left thalamus sends its fibres entirely to the left side of the right eye, for the perception of objects situated on the right. In this animal, an injury to the left thalamus might be expected to occasion entire blindness of the right eye alone, and want of perception of objects placed on that side. In

ourselves, a similar injury to the left thalamus would occasion blindness (as before) to all objects situated to our right, owing to insensibility of the left half of the retina of both eyes.

A disorder that has occurred within my own knowledge in the case of a friend, seems fully to confirm this reasoning, as far as a single instance can be depended upon. After he had suffered severe pain in his head for some days, about the left temple, and toward the back of the left eye, his vision became considerably impaired, attended with other symptoms indicating a slight compression on the brain.

It was not till after the lapse of three or four weeks that I saw him, and found that, in addition to other affections which need not here be enumerated, he laboured under a defect of sight similar to those which had happened to myself, but more extensive, and it has unfortunately been far more permanent. In this case the blindness was at that time, and still is, entire, with reference to all objects situated to the right of his centre of view. Fortunately, the field of his vision is sufficient for writing perfectly. He sees what he writes, and the pen with which he writes, but not the hand that moves the pen. This affection is, as far as can be observed, the same in both eyes, and consists in an insensibility of the retina on the left side of each eye. It seems most probable that some effusion took place at the time of the original pain on that side of the head, and has left a permanent compression on the left thalamus. This partial blindness has now lasted so long without sensible amendment, as to make it very doubtful when my friend may recover the complete perception of objects on that side of him.

In reviewing the several phenomena that I have described, we find partial blindness occurring at the same time in both eyes. This sympathy from disease is readily explained, on the supposition that the parts which sympathize receive their nerves from the same source, while the opposite halves of the eyes, which are not at the same time similarly affected, are supplied from an opposite source; and the inference is immediate, that, in common vision also, the sympathy of corresponding points, which receive similar impressions from the same object, is dependent on the arrangement of nerves thus detected by disease.

We find moreover in the sturgeon, (and it is the same in some other fishes,) whose eyes can scarcely see the same object at once, and have no corresponding points which ordinarily sympathize, that the two eyes do not receive any nervous fibres from the same source; but one eye receives its nerve wholly from one side, and the other from the other side of the brain.

From the structure of these fish, we learn distinctly that the perception of objects toward one side is dependent on nerves derived from the opposite side of the brain; and, in the last case of diseased vision above related, we find apparent injury to one side of the brain followed by blindness toward the opposite side of the point to which both eyes are directed.

A series of evidence in such apparent harmony throughout, seems clearly to establish that distribution of nerves I have endeavoured to describe, which may be called the semi-decussation of the optic nerves.

On single Vision with two Eyes.

So long as our consideration of the functions of a pair of eyes is confined to the performance of healthy eyes in common vision, when we remark that only one impression is made upon the mind, though two images are formed at the same moment on corresponding parts of our two eyes, we may rest satisfied in ascribing the apparent unity of the impression to habitual sympathy of the parts, without endeavouring to trace further the origin of that sympathy, or the reason why, in infancy, the eyes ever assume one certain direction of correspondence, in preference to squinting.

But, when we regard sympathy as arising from structure, and dependent on connexion of nervous fibres, we therein see a distinct origin of that habit, and have presented to us a manifest cause why infants first begin to give the corresponding direction to their eyes, and we clearly gain a step in the solution, if not a full explanation, of the long agitated question of single vision with two eyes.

It may, perhaps, to some persons appear surprising that so many as three instances of a disorder, which they presume to be rare, should have been witnessed by one individual; but I apprehend, on the contrary, this half-blindness to be far more common than is generally supposed; and I might, with as much reason, express surprise at its having so far escaped notice,* were I not aware how many facts commonly remain disregarded, merely for want of explanation. It is evident that I once, and for a long time, overlooked the inference that is to be drawn from this affection; and, if the disorder had not happened to me a second time, I might never have reconsidered its cause.

Even since the preceding pages were written, I have met with two more cases of this disease. One of my friends has been habitually subject to it for sixteen or seventeen years, whenever his stomach is in any considerable degree deranged. In him the blindness has been invariably to his right of the centre of vision, and, from want of due consideration, had been considered as temporary insensibility of the right eye; but he is now satisfied that this really is not the case, but that both eyes have been similarly affected with half-blindness. This symptom of his indigestion usually lasts about a quarter of an hour or twenty minutes, and then subsides, without leaving any permanent imperfection of sight.

I have not seen the subject of the fifth case; but I am informed that he has had many returns of this affection, generally attended with headache, and always lasting about twenty minutes, with very little variation.

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* Richter, in the third volume of his "Elements of Surgery," has a chapter on Half-blindness, and part of it relates to what he terms Amaurosis dimidiata. From one instance there given, he seems to have seen some cases similar to those I have described; but he has not noticed the corresponding affection of the two eyes, or considered the sympathy between them.—*Anfangs-gründe der Wundartzeneykunst*, vol. iii. chap. 16, p. 478.

Art. II.—*Effects of Lightning upon the Human Body, exemplified by a remarkable Accident.* By Dr. Tilesius, of Mülhausen.—(From the Edinburgh Philosophical Journal.)

In the ninth volume of Schweigger's Journal, there is an account of an accident, caused by lightning, which may throw some light upon the mode of action of this formidable meteor. As two carts were proceeding in a hollow way, bordered on either side by a wood, they were successively struck by a thunder-bolt. In the first cart were seated the two brothers Teele, the one aged thirty-three years, the other twenty-nine: in the second, Mr. Teele the nephew, a young man of twenty, and Mr. Decker. The lightning struck successively the horse of the first cart, the two brothers, Mr. Decker, and his companion; the latter of whom did not survive the accident. The horse was killed upon the spot: the skin of the belly was torn in all the lower part, the mouth left open, and the teeth blackened. It struck the younger Teele, passing through his umbrella, which was thrown to a distance of twenty-four paces from the cart: the cart itself was perforated with a hole of half a foot in diameter. The body, on being carried to the nearest village, was put into a tepid bath, and rubbed; blood flowed from the nose, the mouth, and ears, but no sign of life appeared. The mouth and nose were blackened; the skin and muscles of the arms and hands, which were both employed in holding the shaft of the umbrella, were furrowed to the bone; the sleeves of the coat and shirt were torn; but the lesions of the skin were not of the nature of tumors or scars, such as are produced by the application of red-hot iron: the skin looked as if it had been raised by a very quick rubbing. In the same manner, the clothes bore no marks of burning, but seemed as if they had been torn by the rapid passage of a sharp point. Mr. Decker, who was in the same cart, received, at the same instant, so violent a blow in the lower belly, that he was precipitated from the cart, and remained senseless for half an hour. When he was undressed, the place in which he had felt the shock was of a bright red colour, but without any open wound. He was, by this time, in a condition for continuing his journey.

The two brothers Teele had suffered considerable damage from the lightning; they, however, quickly recovered, as will presently be seen. But it will be interesting, in the first place, to follow the progress of the electric fluid over the different parts of their bodies, and to observe the nature of the wounds which resulted. They were sitting by the side of one another when struck. The lightning first hit the head of the elder; it tore to pieces the velvet cap which he had on, grazed the temporal bone an inch above the left ear, and then behind the ear; after which, slightly raising the skin, it descended upon the neck, traversing the back part obliquely, and ascended toward the right ear; here it scratched the inner part of the ear, near the tragus and antihelix; it then fell upon the right shoulder, passed beneath the chin, over the right breast and arm; and, returning to the back, descended along the vertebral column to the sacrum. In this latter part of the course of the lightning, the skin was not cut, but only a little raised, and very red. Impressions of the same nature were seen across the arms; and attested, as well as the

rupture of the clothes, the zig-zag progress of the lightning, which had passed alternately from the right side of the younger brother to the left side of the elder. It fixed upon the latter, on meeting with some pieces of metal that were in his waistcoat pocket: here it raised the skin upon a space about the size of the hand. After this it descended upon the left part of the region of the pubis, and traversed the inner surface of the thigh, the ham, and calf of the leg. A piece of steel, which the younger of the brothers carried in his fob, led the lightning to the region of the groin, where a space of the size of the piece was deprived of the skin, and affected with a deep wound. The breadth of the mark left by the lightning upon the different parts of the body was in general two inches; the wounds were more extended and deeper at the intersections of this mark; several of them were very painful, and suppurated abundantly. The skin had been rolled, in close folds, to the right and left, by the rapid passage of the lightning. The wounds did not bleed; and all that had to be done was to provide for the renovation of the skin destroyed. In a word, there was no indication of any lesion of organs by fire or heat; but the effect produced might be compared to that which takes place when a ball grazes the surface of a limb.

Dr. Tilesius having assisted at the two first dressings, had all the leisure necessary for carefully examining the form and nature of the hurts: he even took a sketch of them, which accompanies his Memoir.

The brothers Teele, after having perfectly recovered themselves, were affected with violent nausea, and vomited repeatedly, when some cups of tea were given them to drink: they threw up a little blood at first, as had happened to the one who had been killed. Notwithstanding the great extent of their wounds, and their being besides of a robust habit, they had no fever. The elder was perfectly deaf on the day of the accident; but on the following day he recovered his hearing to a certain degree. No trace of paralysis made its appearance in the limbs struck by the lightning. The wounds were cicatrized in the space of a few weeks.

Dr. Tilesius having seen Dr. Bauer, the physician of the brothers Teele, a year after the accident, (which took place in May 1821,) received from him the following information:—The elder has remained somewhat dull of hearing, more or less so according to the season: he experiences a marked disposition to sleep, and would often remain twenty-four hours together asleep, were he not wakened. The younger has latterly had an inflammatory fever. He is subject to a periodical weakness, or state of relaxation, which was before unknown to him. In general, it has had a much greater influence upon the nervous system of the two brothers than might have been presumed from the vigour of their constitution. The cicatrices of the wounds now present, in several places, the appearance of the turns of a screw.

ART. III.—*Account of William Dempster, who swallowed a Table-knife nine inches long; with a Notice of a similar Case in a Prussian Knife-eater.* By THOMAS BARNES, M.D. Member of the Royal College of Surgeons, London; Member of the Wernerian Natural History Society; and Physician to the Fever Hospital and Dispensary, Carlisle.—(From the Edinburgh Philosoph. Journal.)

SEVERAL cases of knife-eaters are on record. One of the most remarkable is that of John Cummings, who lived ten years after having swallowed a number of clasp-knives: his case is related by Mr. Marcet, and an account of it is published in the seventh volume of the Edinburgh Philosophical Journal. The following case lately occurred in Carlisle, and excited considerable interest and sympathy, not only among the inhabitants of that city, but also very generally throughout the country. The case was particularly interesting to the medical profession, both as to the physiological fact that the functions of life were not interrupted, and even suffered little disturbance, by the presence of so large an extraneous substance as a table-knife in the stomach; and as to the medical and chirurgical treatment the profession could supply in so singular a case.

William Dempster, a juggler, twenty-eight years of age, of a high complexion and sanguine temperament, came to Carlisle in November last, with the intention of exhibiting some tricks by slight-of-hand; and, on the evening of the 17th of the same month, when in a small inn in Botchergate, with a number of people about him, whom he was amusing by pretending to swallow a table-knife; and, in the act of putting the knife into his throat, he thought some person near him was about to touch his elbow, which agitated and confused him so much, that the knife slipped from his fingers, and passed down the gullet into the stomach. Immediately after the accident, he became dreadfully alarmed, was in great mental agony, and apprehended instantaneous death. The knife, when given to him, measured nine inches in length, and had a bone handle, which went first down into the stomach: the blade, which was not very sharp, was one inch in breadth. Medical assistance was soon procured, and several attempts were made to extract the knife: first with the fingers alone, then with a pair of short curved forceps, and afterwards by a pair of very long forceps, made for the occasion, but without success. The knife, indeed, could not be reached by any of these means; and nothing resembling it could be felt externally on the region of the stomach. His mind continued much depressed, though he had very little pain or uneasiness. He was encouraged by the medical attendants, and directed to be removed as quietly as possible to his lodgings, and to take nothing that night except a little cold water. He had some sleep, and next morning said he felt occasionally pain in his stomach. Twelve ounces of blood were taken from his arm, and an enema was ordered him. He afterwards complained of pain in the left shoulder, shooting across the chest to the stomach; and the blood-letting was repeated. A hard substance, which was believed to be the handle of the knife, could now be felt very distinctly, by pressing the fingers very gently on the umbilicus; slight pressure gave him consider-

able pain. Although his sufferings was much less than could have been expected, his health became gradually impaired, and his strength reduced. He was able to walk about a little in the day, and could sleep in the night on his back, but could not lie on either side. He took some diluted sulphuric acid for two or three weeks, which was discontinued, as he thought it increased the pain in his stomach. His bowels were kept open by castor-oil and injections; the alvine evacuations were of a dark ferruginous colour, which probably arose from the decomposition of the knife. The pulse was very little affected, being generally between seventy and eighty in a minute. His diet consisted of soup, gruel, and tea, taken in small quantities. When the stomach was empty of food, the handle of the knife could be distinctly felt, extending from above downwards, by placing the hand very lightly on the abdomen, a little above the umbilicus; but a single cup of tea, or a little food of any kind, distended the stomach so much, that it entirely disappeared. He was frequently squeamish and sick at his stomach, and sometimes felt a severe twisting pain in that organ.

The case being a remarkable one, and of very rare occurrence, the patient was visited by a great number of medical men. All the professional men in Carlisle were consulted respecting him; and, that nothing might be omitted that could benefit this unfortunate man, his case was stated to Sir Astley Cooper of London, Mr. George Bell of Edinburgh, and a few others. As the great length of the knife would prevent the possibility of its passing the pylorus, or making the turns of the intestines, and it seemed improbable that the patient would live sufficiently long for it to be dissolved in the stomach, various means were suggested to extract it; for, although Dempster had survived the first shock of swallowing the knife, and there was no risk of speedy destruction of life, the action of the gastric juice, or of any medicine that could be given, it was supposed would be so slow, particularly upon the blade of the knife, that it was deemed advisable to extract it, if possible. Besides the means already mentioned, the following (though not had recourse to) was deserving of notice:—An eminent and excellent surgeon recommended that Dempster should be accustomed to receive, two or three times a-day, a large smooth elastic gum bougie into the stomach, and gradually allow it to remain one, two, three, or ten minutes there; that tubes of elastic gum, twenty inches long, should be prepared, of various sizes, from one-quarter of an inch in diameter, and open at each end; that the extremity to be introduced into the stomach should be filled up by means of an ivory ball attached to a wire or piece of whalebone, so that the lining membrane of the œsophagus would not be injured during its passage. The piece of ivory to be removed, and instead of it a pair of forceps, resembling those used by Sir Astley Cooper for removing stones from the bladder, or a pair of forceps which expand of themselves when pushed forward and not restrained by the tube, to be introduced. The same surgeon observed, that many contrivances might be devised for laying hold of, or entangling, the knife; but, as it might be seized at an improper place, no instrument should be used but which could be immediately disengaged from the knife, if necessary.

The above plan was recommended on the principle, that when a

probang, or any foreign instrument, is forcibly introduced into the stomach through the œsophagus, violent exertions and spasms of the muscles concerned in deglutition take place; but, on every successive repetition, these spasms become less and less, until they abate almost entirely. This is exemplified in those who require to be fed by a tube, introduced into the stomach, and a syringe.

Another plan was to make the knife force its own way through the parietes of the stomach and abdomen, and so assist it ultimately by a chirurgical operation. This was to be accomplished by the patient's lying entirely on one side or on his face, when his stomach was empty, so that inflammation and suppuration might be excited; and, after adhesion had taken place, might be aided by the scalpel. We know that a mulberry calculus has repeatedly forced its way through the bladder and rectum, through the bladder and perineum, through the bladder above the pubes, by the patient having been confined for years to bed, and lying in the relative postures favourable for such operations of nature; also, that many gall-stones have forced their way through the abdominal parietes.

The only other plan of treatment that I shall mention, is that which was proposed by the surgeons of the Carlisle Dispensary, and was also recommended and sanctioned by one of the first surgeons in Europe: it was, that an incision should be made into the patient's stomach, and the knife extracted. The last report of the Carlisle Dispensary contains the following observations concerning Dempster:—"The surgeons of the Dispensary were unanimously agreed as to the best mode of treating this extraordinary case: they were of opinion that nothing but an operation could save the patient's life, but he could not be persuaded to submit to it."

He remained in Carlisle until the 28th of December, when he left it, with the intention of proceeding to his friends at Hammersmith, in the neighbourhood of London. It is proper to remark, that his journey was neither recommended nor sanctioned by the medical officers of the Dispensary; it was contrary to their advice: they apprehended dangerous and fatal consequences from it, and anxiously wished him to continue in Carlisle. It appears from the daily prints, that what they apprehended has in reality happened. This unfortunate man was prevented from pursuing his journey further than Middlewick in Cheshire, where he died on the 16th of January; inflammation and gangrene of the stomach having been produced by the irritation of the knife, and the jolting of the conveyance in his journey.

The celebrated surgeon above alluded to, who recommended an operation, stated, that he was decidedly of opinion that an incision should be made into the person's stomach, if the handle of the knife could be felt as the director to the surgeon. The incision should be in the direction of the linea semilunaris. The stomach should be previously quite empty of food and of liquids. The patient was to be supported, for ten days after the operation, by glysters of broth and jelly; after ten days, jelly might be given.

As Dempster died at a considerable distance from Carlisle, and no authentic account of the dissection has been published, I am not aware

of what change the knife had undergone by being retained in the stomach, nor of the precise appearances the abdominal viscera exhibited after death. The present communication, it is hoped, will induce the surgeons who examined the body, to give an account of their dissection to the public.

A case very similar to the above occurred in Prussia in 1635, of which a very interesting account was written in Latin, by Dr. Daniel Beckher, of Dantzie, and published at Leyden in 1636. The case is well authenticated. Beckher's account of it was submitted to the Faculty of Leyden, who affixed their names to their criticism of his work. It received from them unqualified praise. They passed many high encomiums on the author; considered the case singular, the cure miraculous, and the history of it faithfully and accurately detailed. The style of the work is elegant and classical; the case is described with much minuteness, simplicity, and clearness, and is accompanied with many excellent and valuable observations. The book is divided into four sections. The first treats of the swallowing of the knife; the second, the consultation of the Faculty; the third, the incision of the abdomen and stomach, and the extraction of the knife; and the fourth, the healing of the wound. The following is an abstract of the case:—On the morning of the 29th of May, 1635, Andrew Grunbeide, a young peasant, feeling sick at stomach from having committed some irregularity in his mode of living, endeavoured to excite vomiting by irritating the fauces with the handle of a knife; but the desired effect not being immediately produced, he thrust it further down, in consequence of which it escaped his hold, and gradually descended into the stomach. The knife-eater was terribly frightened at the time, and continued afterwards much depressed, yet was able to follow his accustomed employment without much inconvenience. The wretched condition of this afflicted peasant excited much pity, and many physicians and surgeons of great learning and celebrity were consulted respecting him. At a meeting of the Faculty, held on the 25th of June, it was decided that the abdomen should be opened, an incision made into the stomach, and the knife extracted. Previous to the operation, the patient was to make use of a balsamic oil, called Spanish Balsam, which they supposed would alleviate the pains of the stomach, and facilitate the healing of the wound. The 9th of July was fixed for the operation; and it was performed in the presence of the dean of Faculty of Medicine, the physicians and members of College, the students of Medicine, and an experienced surgeon and lithotomist of the name of Shoval. A straight incision was made in the left hypochondrium, two fingers breadth, under the false ribs; first through the skin and cellular membrane, then through the muscles and peritoneum. The stomach subsided and slipped from the fingers, which prevented it from being immediately seized; but it was at length caught hold of with a curved needle, and drawn out of the wound. A small incision was then made into it upon the knife, which was then easily extracted. The stomach immediately collapsed. After the external wound had been properly cleaned, it was united with five sutures, and tepid balsam poured into the interstices. Tents impregnated with the same balsam, and a cataplasm composed of bolar earth,

the white of egg, and alum, were then applied. In the evening, the cataplasm was removed, a styptic plaster applied, and he took a decoction of betony, tormentil, and fever-few, with a powder, consisting of nutmeg and crab's-eyes. The report next morning was, that he had had a quiet night; pulse a little accelerated; had passed some bloody urine, which deposited a sediment of grumous blood; the wound looked well; he complained of no pain. Two sutures were removed, and the balsam and plaster again applied. He was allowed chicken-broth, boiled with some bitter and astringent herbs. The wound was dressed again in the evening; and, as he had not had an alvine evacuation, a suppository was directed to be used. On the 11th, two more sutures were removed; pulse less frequent; urine still bloody; complained of pain and tension in the left hypochondrium. Two enemas were administered, and he passed a copious black dejection. The wound was regularly dressed twice a-day; he was allowed a very strict diet, and his drink was moderately warm; bowels were kept open by injections; urine continued tinged with blood until the 13th. On the 15th of July, and the seventh after the operation, he was pronounced out of danger. On the 16th, he took a little infusion of rhubarb, with syrup, as an aperient. The same treatment and dressing were continued until the 23d of July, which was the fourteenth day after the operation, when the wound had healed, and nothing occurred afterwards worthy of notice. He was restored to the best of health, gradually returned to his ordinary diet and employment, and never afterwards complained of pains in his stomach.

In the fifth volume of Jones's edition of the Philosophical Transactions, Dr. W. Oliver informs us, that in 1685 he was at Koningsberg in Prussia, where he saw the knife that was swallowed by the Prussian boor. It was kept in a velvet bag in the King of Prussia's library. According to the engravings given of it, he says it measured six inches and a half long, English measure. Beckher says, the knife "decem pollicum latitudinem adæquabat." Dr. Oliver met with a Mr. Taylor, a Scotch merchant at Koningsberg, who told him that Andrew Grunbeide was his particular friend and acquaintance; that he saw his wound several times when his surgeons dressed him, and was godfather to one or two of his children afterwards.

It is much to be regretted that William Dempster could neither be prevailed upon to submit to an operation, nor to remain in Carlisle. As an operation succeeded near two centuries ago, when surgery was in a very imperfect state, it is highly probable that, under the present improved state of surgery, a similar operation would have been attended with success. The many valuable improvements that have been introduced into surgery, both in the operative part and in the subsequent mode of treatment, must give the moderns a decided advantage over the ancients in the success of their operations. Had he remained in Carlisle, even although no operation had been performed, it is very probable his life would have been spared much longer than it actually was. He became weak and emaciated; but, as has been before stated, was able to walk about the town, and the stomach had, in some degree, become accustomed to the presence of the knife. The handle, and perhaps the

blade also, would be dissolving, so that the bulk would be diminished; and, if the knife had not been altogether removed in this way, it would have produced less irritation, and he might have lived a considerable time. There is even some probability that the knife might, in the course of time, have made its way through the stomach and parietes of the abdomen, by inflammation, abscess, and ulceration; as extraneous bodies have frequently been brought from various internal parts to the external surface by these processes, or by what some surgeons have termed *progressive absorption.*

CRITICAL ANALYSIS

OF

ENGLISH AND FOREIGN LITERATURE

RELATIVE TO THE VARIOUS BRANCHES OF

Medical Science.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus.*—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*Concise Narrative of an Ophthalmia, which prevailed in a Detachment of His Majesty's 44th Regiment, on their Voyage to Calcutta, in the Summer of 1822; together with an Account of other Tropical Diseases, and their Treatment on board the H. C. Ship, Warren Hastings.* By RICHARD JONES, Leamington. Fellow of the Royal College of Surgeons, and late Assistant Surgeon to the Warren Hastings, &c.—8vo. pp. 57. H. Sharpe, Warwick. 1824.

ART. II.—*Practical Remarks. Part I. on Acute and Chronic Ophthalmia, Ulcers of the Eye, &c. &c. Part II. on Remittent Fever, viz. Simple and Complicated.* By THOMAS O'HALLORAN, M.D. Author of Treatises on the Barcelona and Andalusian Yellow Fever Epidemics.—8vo. pp. 148. Burgess and Hill, London. 1824.

ART. III.—*Observations on the History and Treatment of the Ophthalmia accompanying the secondary Forms of Lues Venerea. Illustrated by Cases.* By THOMAS HEWSON, A.B. Member of the Royal College of Surgeons in Ireland; Professor of Materia Medica and Pharmacy to the College; and Surgeon to the Meath Hospital, and County of Down Infirmary, &c. &c. &c.—8vo. pp. 117. Longman and Co. 1824.

THE works which stand at the head of this article have been placed in our hands within the last few weeks; the subject upon which they principally treat is one of great importance, and, although so much has lately been written and said upon it, it

appears, by the tenor of one at least of these performances, to be far from exhausted. In the days of our youth, the term ophthalmia did not convey with it impressions of so serious a nature as have of late been attached, and justly attached, to it. Since the expedition to Egypt, it has become, as it were, domesticated among us: in the army it has continued to the present day; in some of our public establishments it has obtained, and still keeps, a firm footing; and, in private life, it is not only more frequently met with, but its attacks are more formidable, and more obstinate, than heretofore. Nor is it to our own country only that these remarks are applicable; on the continent, some portions of the Prussian army have lately experienced its visitations; and, during the residence of the Army of Occupation in France, some English regiments suffered much from attacks of this malady.

It is but bare justice to say that, in the investigation of the symptoms of this disease, and in establishing a just and rational mode of treatment, the army medical officers may proudly claim a pre-eminence of merit: the work of Dr. VETCH especially, the labours of Mr. GUTHRIE and many others, not forgetting the late able papers of Mr. MELIN, published in this Journal, have conferred high credit on their names, and a lasting benefit on posterity. Nor must we omit our unfeigned tribute of praise to the labours of Mr. TRAVERS, whose classical performance has done much towards rescuing this disease, or rather this class of diseases, from the hands of the mere oculists; men who, however skilful they may become in the performance of operations upon this important organ, appear to us to be in general greatly ignorant of the proper constitutional treatment necessary to conduct the cure of these complaints to a happy issue.

Neither the little work of Mr. JONES, nor that of Dr. O'HALLORAN, are entirely devoted to the consideration of ophthalmia; but it is our intention, upon the present occasion, merely to consider this portion of their labours, and probably to notice, at some future period, the result of their observations on other diseases.

It would be unjust to close these preliminary remarks without offering our tribute of praise to the Army Medical Board, under whose auspices, and by whose judicious arrangements and regulations the professional character of the medical department of the army has attained its present high station.

We shall commence our analysis with Mr. JONES's pamphlet, only a few pages of which bear upon the present question. This gentleman sailed as assistant surgeon in the Warren Hastings, East-Indiaman, in June 1822, with a detachment of three hundred of the 44th regiment of Foot, together with their wives and children, amounting to about eighty. In

about ten days after they put to sea, several of the soldiers complained of sore eyes, and a wash was made use of; but the symptoms became more urgent, and the contagious nature of the malady became apparent, says our author; "for the disease increased at once, both in the numbers whom it attacked and in malignity, assuming at length the worst forms, and every variety of ophthalmia." This paragraph of our author's requires a little consideration, since it involves the question of contagion, which, however undeniable in a certain stage of the disease, does not appear to be properly applied on the present occasion; as the sudden increase of the disease is exactly what might have been expected, where all were exposed to the same causes, (i. e. the heat of the sun by day, and the foul air of the deck at night;) whereas, a disease spreading by contagion would increase in a slower and more gradual manner. Nothing is more necessary than to have precise ideas affixed to particular terms, and in no case is this more requisite than where contagion is concerned or suspected.

Our author next proceeds to describe the symptoms of this form of ophthalmia, which usually appeared but trifling for two or three days, and then rapidly increased: it was, in fact, an acute inflammation of the conjunctiva; and the practice he adopted in the acute stage was that of general bleeding, purging, and tepid fomentation. Mr. Jones laments that he had no leeches on board: for our own parts, we greatly prefer one general bleeding in these attacks, but are ready to concede that this plan is frequently—perhaps generally, carried to a pernicious extent. In the latter stages of the disease, and to remove the opacity of the cornea, vinum opii was the common remedy.

Two cases only are detailed by our author, as illustrative of this disease; but they are, in fact, different in their nature: inasmuch as the last case was one in which inflammation had seized the internal structure of the eye, and mercury was had recourse to, with the most beneficial result. The only criticism we shall venture upon these two cases is, that in both the incipient symptoms appear to have been allowed to run on rather too long before active depletion was employed. In the first case, we are not informed how long the *trifling* inflammation of the conjunctiva had existed; but it is stated that the man was admitted on the 28th of July, that a collyrium was ordered, and a dose of sulphate of magnesia given; the next day, the palpebræ were closed, and the purulent discharge established. We shall not continue to detail the progress of the case: it is very creditable to our author, and ended favourably. In the second case, a trifling redness of the conjunctiva had existed for a week, and during that time the zinc lotion had been used, and purgatives taken, with little benefit. The result was, that inflammation

spread to the sclerotica and iris. Proper measures were then resorted to; but still the administration of mercury was delayed for two days, and, although the recovery was tolerably complete, yet there was a cloudiness of the pupil and a puckering of the iris remaining, when the man left the ship.

We have thought it our duty freely to point out these circumstances to our readers, because, if there be a complaint in the catalogue of human ills that requires instant decision and prompt treatment, it is the one above mentioned. An immediate bleeding in the one case, and as immediate and rapid introduction of mercury in the other, would probably have cut short the disease in these instances.

It will presently be seen that the treatment recorded in Mr. Jones's work is not that which is recently advocated by the author next in order on our list, nor by our respected correspondent from Fort Pitt; but that point shall be considered presently, and we have only to add, in justice to Mr. Jones, that he most ingenuously gives his opinion that the earlier adoption of venesection would have cut off the disease; a fact which its subsequent adoption, in upwards of an hundred cases, fully justified.

The name of Dr. O'Halloran is well known to the profession as a zealous and intrepid medical officer, who has investigated, with considerable ability, the circumstances of the late fever at Barcelona, and of whose labours we had occasion to speak very favourably at no distant period. He now comes again before the public, detailing the result of his experience in ophthalmia, of which he has witnessed a great number of cases, both in Europe, America, and its islands. There will be found a very striking coincidence between this gentleman's mode of treatment and that recommended by Mr. Melin, in his very able Report from Fort Pitt; and, were it not that Dr. O'Halloran practised at Gibraltar, and the latter gentleman in England, we should almost suppose they had both been thinking and acting in concert. There are, it is true, a few shades of difference between them; but, in their general principles and views, the most striking conformity of sentiment subsists.

It will now be our business to detail Dr. O'Halloran's opinions and practice to our readers, comparing it with Mr. Melin's statement, and offering such comments as our own experience suggests; being well convinced that these gentlemen seek only the truth, and therefore will not feel disposed to quarrel with us, should we feel it our duty to dissent from them in some particular points of their practice.

Dr. O'Halloran's preface contains, in a compressed form, the substance of his opinions relative to ophthalmia, as well as of the line of practice he has latterly adopted. For twelve years he appears to have combated this disease by large and frequent

bleedings, and by the strictest antiphlogistic regimen; but he was frequently disappointed when he had been almost confident of success: nay, he affirms that a review of his own practice during these twelve years proved that this disease was aggravated by low diet, depletion, confinement to bed, &c.; and it was clearly established that the exclusion of light and air was highly injurious. Under these impressions, our author visited Chatham in July of this year, and there was informed by Mr. Melin of the plan of treatment that had for the last three years been adopted by him, and which we have lately laid before our readers; a plan exactly in conformity with that which Dr. O'Halloran had employed in the 64th regiment.

Proceeding now to the work itself, we find the first chapter containing general remarks on the prevalence of acute ophthalmia in the army. That it is a disease more unmanageable in such situations than in private life, cannot for a moment be denied; a fact that is now, indeed, unfortunately established by its obstinate adherence to some of our public institutions, where, from the numbers assembled under one roof, they are placed in the same circumstances as bodies of the military. There is, indeed, something very inexplicable and difficult to solve in this perpetual renewal or propagation of the disease. We have seen it for months affecting solely one corps, out of many placed precisely in the same situation, following them in every change of quarter, in spite of every precaution of cleanliness, ventilation, &c.: nay, we have seen it persisting in only one company of a regiment, and at last disappearing suddenly, without any apparent reason.

A page or two of Dr. O'Halloran's work is occupied with severe, but not unjust, strictures upon the sarcasms to which the military surgeon has been exposed, in consequence of his being frequently baffled in his attempts to cure this disease; and with allusions to a recent investigation, which terminated so highly to the honour of the medical officers of the army, but which we do not deem it necessary to dwell upon.

Our author has described three varieties of ophthalmia: the first appears to have been a mild or subacute inflammation of the conjunctiva; the second, the more acute form of this disease; and the third variety is the purulent ophthalmia, which has usually been denominated the Egyptian. These three varieties appear to us to differ more in degree than in kind; they may be modified by both external or internal circumstances, —by the habits of the patient, as well as by his original constitution. All these three varieties may, however, so far be considered as one disease, contradistinguished from that species of affection called chronic ophthalmia. To return to our author. He describes these varieties as follows:—

"*Variety I.*—The first variety of this disease, as it appeared in the 64th regiment, exhibited redness of the conjunctiva and lining membranes of the eye-lids. The lachrymal discharge, if at all increased, was increased so inconsiderably as scarcely to deserve notice. The turgescence of the vessels of the conjunctiva and upper eye-lids was slight. It conveyed an imperfect idea of sand interposed between the membranes. The vision was little, if at all, affected. The symptoms now stated characterised the first variety. The inflammation was moderate, sufficiently active to produce redness, or what is commonly called ophthalmia: it was inadequate to the establishment of a condition in which an unusual quantity of fluid is ejected. The disease in this form is simple at the onset, and it frequently yielded to simple means of remedy in a few days. It rarely assumed a serious form under proper management; and relapses, although not uncommon, were much less so than in the other varieties.

"*Variety II.*—The second variety is of a more complicated nature than the first. The attack is sudden, rarely indicated by premonitory symptoms. Where these take place, they consist of heaviness about the orbits, and inability to move the eye-lids with the usual freedom. The first symptom which attracts the patient's attention, is an increase of the lachrymal secretion, which, as it becomes abundant in quantity, flows over the cheeks, the ducts being incapable of removing it in the usual manner. If the upper lids be examined at this time, although the covering membrane of the ball be free from disease, a villous floculence is there discernible; even sometimes a thickening, approaching to what is commonly called granulation, chiefly observable towards the inner angle, though occasionally over the whole of the eye-lid. It was this state of the eye-lids (and it in many instances precedes the explosion of the disease on the ball of the eye,) which chiefly directed my attention to the plan of treatment hereafter to be noticed. A thickening of the upper no sooner takes place, than the lower eye-lids become villous and slightly prominent. The sensation of sand, if not synchronous with the thickening of the lining membrane of the upper eye-lid, now becomes unpleasant; the patient imagining that the disagreeable feeling he experiences is owing to the lodgment of an extraneous body between the palpebræ and ball of the eye. As the sensation of intervening sand increases, the watery discharge also increases; and, soon becoming acrid and corrosive, produces a degree of pain, which obliges the patient, unaccustomed to the irritation, to seek relief from friction, the act of which produces redness of the sclerotic coat and conjunctival membrane, followed by distension of innumerable small vessels. The meïbomian glands, previously in a state of irritation, now increase in size, and discharge a fluid proportionate to their enlargement. Limpid serum flows from all parts of the eye and eye-lids; and, as it is changed in quality as well as in quantity, in its descent it excoriates the parts over which it passes. Matter of a similar kind insinuates itself into the substance of the lower eye-lids, so as to cause slight tumefaction, and hardness of the parts. From the state of the lower eye-lids, a prognosis may be formed relative to the severity of the disease. The difficulty of cure augments with the tumefaction and hardness of the lower eye-lids;

nor can a perfect cure be accomplished until these are restored to their natural flaccid state. In this form of ophthalmia, the action of the secreting vessels is augmented in so high a degree, as not only to cause, in all cases, an extraordinary discharge of fluid, insinuating itself into the surrounding parts, but to produce, in many instances, a defect in vision, by the quantity of serum effused into the anterior and posterior chambers of the eye.

"*Variety III.*—The two preceding conditions of ophthalmia are by many considered as simple. The form now under consideration (viz. the purulent,) comparatively complex. This form of disease, if we permit ourselves to judge by external appearances, is of a more serious nature than the second, but it is doubtful that it is so in reality; for, of the numerous cases of different varieties which came under my observation, those which assumed the purulent mode of action yielded to remedy as soon, and as certainly, as the complicated cases of the other varieties. In this form also the attack is sudden, not announced by premonitory symptoms: when they do exist, they consist, as in the other form, in a sensation of stiffness or heaviness about the orbits,—an inability to move the eye with the accustomed freedom. The eye becomes itchy; and the patient cannot be persuaded but that sand or dirt, as he expresses it, is lodged between the eye-lid and ball of the eye. He endeavours to remove the disagreeable sensation by rubbing; which, not producing the expected relief, is immediately succeeded by obtuse pain, augmentation of the sensation of heaviness, and by a flow of fluid resembling tears; which, from being thin and watery at first, is converted into a puriform matter, wholly divested of the acrimony attending the serous discharge in the second form. If the eye-lids be now examined, a thickening of the lining membrane of the upper is observable, and the lower are villous. As the puriform discharge augments, it becomes dense and tenacious; the capillary vessels on the ball of the eye and neighbouring parts are in a state of irritation. This is considerably augmented by rubbing the ball, and the propensity to rub is irresistible. The vessels which nourish the conjunctiva and lining membranes pour forth a matter of a puriform nature, whilst those of the eye-lids internally, and also of the internal parts of the eye, secrete and discharge a quantity of whey-coloured serum, producing a tumefied state of the eye-lids and of the ball of the eye, which characterize the disease, and occasion the partial or total loss of vision. (The loss of vision is attributable to the existence of a turbid fluid in the aqueous and vitreous humours; the obtuse pain to the distention of the ball of the eye from extravasated fluid, and not to inflammation.) As the turgescence and prominence of the eye-lids, which assume a bluish hue, increase, the vessels which nourish the conjunctiva and sclerotica augment in size; the texture of the former, being reticular and spongy, is injected with red fluid, not blood, or with pure and limpid serum, which, as the determination of fluid to the part is considerable, produces extraordinary distention of the conjunctiva. This is sometimes so great as to cause the distended mass to encroach on the cornea; and, as the size of the latter appears diminished to one-half probably, it excites the apprehension of such as are unacquainted with this form of the disease.

To this state of the conjunctiva oculists have given the name of Chemosis. (Nothing can be more erroneous than that purulent ophthalmia is always connected with, or occasioned by, gonorrhœal discharges. I have seen more than one hundred cases where no venereal taint existed.)" —(P. 5—10.)

We have given our author's description at full length, that we might not do him injustice. His plan of treatment, however, need not detain us long: it is extremely simple, and may be comprised in a very short space; considering these varieties as only modifications of one disease, which, according to our author, is local, the plan of cure was as follows:—The patient was confined to bed in a well-ventilated ward, from which the light was not excluded: he was placed on low diet, purged, and the state of the upper eye-lid especially examined into in every case; and, whenever it appeared villous or thickened, bluestone was rubbed over the surface for a longer or shorter time, according to the state of the membrane. This is at first attended with acute pain, and on one occasion produced syncope; but the resulting benefit is asserted to be very great, and superior to any other hitherto employed. This application is to be followed by fomentations, repeated four or five times in the twenty-four hours. A change for the better will, by these means, be effected in a few hours; and it may be repeated on the second day, if it is demanded; or a solution of lunar caustic, in the proportion of ten grains to an ounce of water, may be instilled into the eye, and the fomentations repeated. Our author speaks warmly of this remedy: he has tried it of all strengths, from one grain to half a drachm to the ounce, but prefers the proportion above mentioned. On the second day it is usual to give a saline purgative, and to repeat the lunar caustic drops in the evening; or to touch the lower eye-lids slightly with the bluestone, and then to foment again. The same plan is pursued on the third day. By this plan, varied according to circumstances, more than eighty in a hundred will recover without the use of other means; and, in consequence of the attention paid to the upper eye-lid, the condition called "granular" will be prevented; relapses will be fewer than under the antiphlogistic mode of treatment; and ulcers will seldom appear, or, when they do, are of a mild kind, and rarely imply much loss of substance.

Such is a brief, but faithful, account of Dr. O'Halloran's treatment of ophthalmia generally; and a reference to Mr. Melin's paper will show how closely the opinions and practice of these gentlemen resemble each other. The latter says that, before he took charge of the ophthalmic division, he considered that a mere local inflammation could scarcely require such extensive depletion as was usually practised; and that he was induced to

make trial of a solution of lunar caustic in these cases, from observing its beneficial effects in gonorrhœa, the disease of a membrane similar in structure to the conjunctiva. The strength he employed was four grains to an ounce of water, used twice in the day; since that period he has treated three hundred cases in this way, with complete success; and he produces the testimony of Mr. Beard, of the Artillery, as confirming his views on the subject. But Mr. Melin carefully draws a distinction between cases of superficial and deep-seated inflammation, in which he advocates the early use of the lancet.

Our readers generally, and especially our country readers, will perhaps feel somewhat startled at the doctrines above detailed, and may be inclined to suspect that we are not in earnest with them: nevertheless, we conceive that a little reflection, and attention to a few plain facts, will enable them to reconcile the above practice with the doctrines more usually entertained; and to demonstrate that there does not exist, in truth, so much difference, as they might at first suspect, between the treatment usually pursued in the army and in civil life.

It is not difficult to account for the great prevalence of ophthalmia among soldiers; with them, all the circumstances of their situation combine to produce the disease: they sleep in apartments crowded in comparison to what usually occurs in private life; they are exposed to the heat of the sultry day, to the damp and cold air of night; and are by no means the most temperate or abstemious of mankind. No wonder, then, that, when once ophthalmia is excited, it is kept up for an indefinite period: the same causes are continuing constantly to operate; and, in addition to this, (in a certain state of the disease, at least,) its propagation by contagion can, we think, scarcely be denied or doubted.

We are unwilling to lengthen this article by any discussion upon the subject of contagion. We are aware of the warmth and eagerness with which this particular point was at one time advocated and denied by the opposite factions, if we may so term them; but we shall merely observe, that the contagionist always possesses the vantage ground in these disputes, inasmuch as it is extremely difficult to prove a negative; and because the prejudices of mankind are always operating in favour of that mode of thinking, for which purpose one solitary instance of disease, apparently passing from one individual to another, will, with the majority, always be conclusive. Nevertheless, in the case of ophthalmia, there appears no good reason to doubt that, if the term contagion be restricted to its legitimate meaning, the matter secreted from the conjunctiva, or probably the tears themselves, are capable of generating a similar disease.

We have, for our own parts, so often seen what appears to us to be irrefragable proofs of this inoculation (if it may be so called), that there is no fact in medicine or surgery more strongly impressed upon our minds. Ophthalmia, then, is a disease with which the army surgeon is unfortunately familiar: in one respect, however, he may be considered as fortunate, because he has the opportunity of seeing the disease absolutely in its nascent state. From him there can be no concealment,—no waiting for a day or two, in the hope of becoming better; but he is at once enabled to adopt those measures which appear to him to be requisite.

Upon this simple circumstance we are induced to found the success of the methods recommended by Dr. O'Halloran and Mr. Melin. The latter of these gentlemen says that he adopted the practice he recommends, from observing a similar good effect to ensue from the use of the same remedy (the lunar caustic) in gonorrhœa. This is another proof in confirmation of our opinion; for every surgeon knows that counter-irritants, applied in the very commencement of a gonorrhœa, will frequently, nay generally, arrest the complaint; and yet these very remedies, if employed after the inflammatory symptoms have fully developed themselves, would produce, and have produced, wherever they have been either inadvertently or injudiciously recommended, the most serious consequences. Again, Dr. O'Halloran says, ophthalmia is a local disease; another proof that he is speaking of it in its very infancy: for surely no one will venture to say this of an ophthalmia which has proceeded in its course a given time, and where we shall find the whole arterial system in arms, and the constitution generally sympathising in the attack. This opinion is still more strengthened by that gentleman himself, when he says that this state of the eye-lids (the thickened), in many instances *precedes* the explosion of the disease on the ball of the eye; that being, in truth, the period when the lunar caustic, or sulphate of copper, may be used with the view of cutting short the disease.

On another point we must likewise offer a few words. Dr. O'Halloran exposes his patients freely to air and to light. With regard to the former of these directions, we agree with him perfectly: we consider the exclusion of air, by close shades or clothes, as highly pernicious; but we cannot express the same opinion as far as light is concerned, since nothing can be more intolerable or painful to patients labouring under any condition of inflammatory action about the eye: nay, we will venture to say that the eye will instantly shut itself against the light, whatever the wish or the command of the surgeon may be. It appears to us, therefore, that, although we must admit that Dr. O'Halloran has made out a good case in favour of his mode of

treatment, that those who practise in civil life will do well to recollect that it is only adapted to the *very commencement* of the disease; that where local pain is great,—where the sclerotic coat, or any of the internal parts of the eye, partake of the inflammatory action,—where the constitution feels the disturbance, —depletion, rational but effective depletion, must still be our sheet-anchor. We may confess freely, that this practice has been carried too far, though we certainly have never seen it pursued to the risk and hazard of life, as asserted by our author; but still we do maintain, that we are by no means so convinced by what we have read, as to recommend the unrestricted adoption of the measures above mentioned, which would seem to us to be little less than overturning all the established principles of surgery, by which we are taught that acute inflammation is best combated by blood-letting; and, to say in the words of a highly-esteemed writer on this disease, that experience has demonstrated to us, over and over again, "that the relief afforded by venesection in this class of complaints, is *indescribable*." We, therefore, are of opinion that our author has not sufficiently explained the principles upon which he acts; that he has not defined accurately those conditions of disease in which this stimulating plan is to be adopted; that he has not sufficiently warned us of the necessity of restricting its application to the affections of the conjunctiva simply; a fault which Mr. Melin's papers are entirely free from.

Dr. O'Halloran's chapter on the *acute ophthalmia* is only illustrated by one case.

We now proceed to examine the second chapter, containing practical remarks on *chronic ophthalmia*, from which our extracts will be but sparing, as there is but little difference of opinion among surgeons as to the treatment of this form of the disease: indeed, the principal motive for dwelling upon this chapter at all, is to lay before our readers two peculiar opinions broached by our author; one of which is theoretical, the other appears to us to be merely a dispute about a word. The first opinion we shall give in the Doctor's own words:—

"I am of opinion that, in all cases of ophthalmia of the acute kind, the action of the arteries is inordinately increased, while that of the veins is stationary or diminished; and that upon the relative degrees of action in both depends the nature of the discharge. Where the action of the arteries is moderately excited, with or without a corresponding change in the action of the veins, a watery discharge is produced; where the action of the arteries is inordinately roused, with a corresponding defect in the action of the veins, a purulent production is the consequence:—this appears to be the case in all forms of the disease. The determination of fluid to the parts is inordinate; and, as there appears to be a defect in the activity of the absorbents, or organs of removal, the action

of the glands being also augmented, through the irritation occasioned by immoderate distention, an effusion takes place, both vascular and glandular.

"In chronic ophthalmia, on the other hand, although a state of activity exists in the trunks of the arteries, the blood is torpid in the minute branches; whilst a near approach to stagnation takes place in the veins, external as well as internal. In this case, as well as in the former (viz. the acute), the discharge of fluid from the eye is considerable; for the glands, whose action is angmented according to the increase of disease and size, emit a fluid in quantity considerably exceeding, perhaps, that which is poured out in the acute stage. If we apply caustic or bluestone to the upper or under eye-lids in the chronic ophthalmia, so as to produce a slough, the vessels, being destitute of power, are unable to throw it off in less than from three to six days; whilst, in the acute stage, where the arteries are possessed of high action, the same quantity of slough is ordinarily removed in one night. This is a fact of practical importance. It furnishes us with the means of ascertaining whether the case before us be of the acute or chronic character; and no injury can result from the experiment, for bluestone is equally serviceable in both stages: in addition to this, we also find that, when the disease assumes the chronic form, the veins on the upper eye-lids, forehead, and temples, are gorged with blue blood, and, as they appear wholly destitute of activity, the blood which they contain is in a state of demi-coagulation; the arteries also of the ball of the eye are inordinately distended, and hard to the touch; they appear destitute of the powers of propulsion. I have given this subject a considerable share of attention; and I am of opinion, that a diagnostic can only be formed from the effects of remedies on the parts, or from the state of the vessels external and internal."—(P. 25—27.)

Notwithstanding Dr. O'Halloran's assertion, that he has given this subject much attention, we cannot help thinking that, to form a diagnosis from the mere effect of remedies, is but an uncertain and dangerous mode of proceeding, because, if the practitioner finds himself in the wrong, he cannot well undo the mischief he has done; and we do not see any reason for disregarding the old-fashioned symptom of *acute pain*, as a much surer guide in forming our judgment of the nature of the disease.

With regard to the second point to which we have alluded above, it refers to the existence of granulations in the eye-lids; a circumstance which Dr. O'Halloran utterly denies; and he is equally severe upon the employment of the scissars or knife to remove them. We think well of this practical rule, and believe it to be perfectly just; but, when he denies the existence of granulations, we conceive he is combating with a shadow:—he himself uses the term "granular" in the sense in which it is commonly employed. He recommends caustic or bluestone for the purpose of getting rid of this diseased condition of the

membrane; and his whole quarrel seems to be with the word granulation, to which he has attached the same meaning as is usually applied to the same appearances in open ulcers; a point for which no surgeon, we apprehend, would contest.

We have seen above that our author condemns the use of the knife or scissars; yet there is one condition where the knife, he says, is admissible: it is in the case of the eye-lids being covered with fatty, dry lumps.

The last eight or nine pages of this chapter are occupied with criticisms on detached portions of Mr. Travers' work; the tenor of which is to prove that oculists are, upon the whole, undecided with regard to the treatment of ophthalmia. Having already spoken our sentiments as to the real merits of Mr. Travers' work, we have no intention of becoming the critic of these criticisms; but we think that Dr. O'Halloran is wrong, if he means to employ the term "oculist" to designate that able and intelligent surgeon; and we moreover think that, as a whole, Mr. Travers' book will be found to contain as sound directions for the treatment of diseases of the eyes as any work in our language; and that it is hardly fair to select detached passages of a book for comment, which, taken in connexion with what precedes and follows them, may admit of an interpretation altogether different.

We are happy, in concluding our remarks on Dr. O'Halloran's publication, to be enabled to say that the third chapter, on *ulcers of the cornea and lymphous effusion*, is replete with good sense, and with valuable practical remarks, detailed in a very perspicuous manner; and that, if we are content with this general praise, and do not lay before our readers a formal analysis of this chapter, it is partly because this article has extended so much further than we at first anticipated, but more especially because the doctrines contained in it do not, in any material point, differ from those entertained by other enlightened practitioners.

Mr. Hewson's Treatise on that form of Ophthalmia accompanying the secondary stage of Lues Venerea, next claims our notice; and we feel great pleasure in being able to say, that the task which this gentleman has imposed upon himself has been executed by him in a very creditable manner. Our author complains, and with reason, that this symptom of syphilis has not been attended to sufficiently by systematic writers, nor described with any thing like accuracy even by those who have professedly treated of the disease itself; and he instances some of the greatest names in surgery, in proof of his assertion. From this reproach the late Mr. Saunders is, however, very properly excepted; and it is only to be lamented that the untimely

death of that promising surgeon "left this, as well as most of his other labours, unfinished." Such are the principal considerations that have induced Mr. Hewson to think that a short and distinct practical view of the venereal ophthalmia, divested of those *speculative doctrines* in which the whole subject of lues venerea has, within these few years, been involved, was yet wanting; and he very modestly adds, "that, though an experienced reader will find nothing new or interesting in it, I trust its perusal will prove of some advantage to those for whose instruction it was chiefly undertaken, and is now offered to the public."

We have printed in italics the only part of this paragraph with which we intend to quarrel: we think that Mr. Hewson is not justified in designating the late inquiries into the natural history of lues venerea, as speculative doctrines. Nothing less speculative was ever offered to the public; since from experiment only have all the deductions been drawn, and these experiments have not only been made upon the most extensive scale, but appear to us to have been conducted in the fairest and most ingenuous manner.

In describing this form of ophthalmia, our author observes, that it is useful to distinguish the symptoms into two stages: in the first, they are effectually curable; in the second, they are in a great degree out of the reach of relief, the structure of the eye being more or less permanently injured. This disease always first attacks one eye, though in long-neglected cases this does not invariably happen, and sometimes they suffer alternately. The first attack of the complaint is not attended with any great pain; there is an increased flow of tears, and objects appear as if seen through a mist. We copy the following accurate description of the symptoms, as given by our author:—

"The patient keeps his eye half-closed, and avoids, as much as possible, exposure to the light, which always excites pain and flow of tears. From the same cause the eye rolls, and is so unsteady, whilst an examination is making of it, that it is often difficult to get a satisfactory view of it.

"There appears always more or less external inflammation; and if we attentively examine the enlarged vessels, we shall, in general, be able to distinguish two tissues of them; one superficial, which belongs to the conjunctiva; and the other more deep-seated, connected with the substance of the sclerotic: in colour, they are sometimes of a florid, but oftener of a purple or venous hue. That part of the conjunctiva which lines the eye-lids is not usually under much irritation; the portion which covers the eye-ball is a little more inflamed: sometimes it is here a little œdematous, or a small vesicle or two may be observed on it; but it never enters into the thickened, fungous structure, nor is there any secretion of purulent mucus from its surface; both of which are so often the effects of the severer forms of external ophthalmia.

"A great part, however, of the redness of the eye-ball is produced by vessels passing through the sclerotic, which, becoming more numerous and frequent in their inosculations as they advance forward, and terminating abruptly, nearly at the space of a line from the cornea, about the situation of the ciliary ligament, cause in this part the peculiar appearance of almost a distinct red circle. Neither at this or the more advanced periods of the disease, do these enlarged vessels pass over the surface of the cornea; nor have I ever observed any speck or ulcer forming on it: in a few instances there has been an appearance like the arcus senilis." (P. 4, 5.)

An inexperienced observer may be at a loss to account for the great defect of vision, of which the patient complains; but the state of the aqueous humor and pupil will account for this: an opaque fluid is seen floating in the anterior chamber, preventing a clear view of the iris and pupil. This is variable in quantity; and, in advanced stages of the disease, vessels shoot into it, and it becomes organized: occasionally, instead of lymph, blood is effused. The state of the pupil is various: as the disease advances, the pupil contracts, and loses its circular shape; but the superior part more usually preserves its natural form. In many cases, one or more tubercles present themselves about it; but they more properly belong to the second stage. The colour of the iris undergoes a very remarkable change: sometimes its surface is found dotted with spots; but our author does not lay much stress on this appearance. Such is the general description of these symptoms, which may remain from six to eighteen days, being seldom protracted beyond the twentieth; and at this period, when the pupil is contracted, and its motions impeded, adhesions may form between it and the capsule of the lens, without being immediately perceptible.

We must hurry over the symptoms of the second stage; but we are told that the choroid coat and retina partake of the diseased action, as well as the iris, and that about this period the other eye begins to be attacked; at first, the symptoms of the complaint appear to be suspended in the eye first attacked, and are afterwards renewed; in this way the eyes are alternately affected, until the disease has fully run its course in both. In some instances the symptoms will afterwards assume a more indolent form, and the pain and irritation will gradually and finally subside. The most fatal termination of the disease is that wherein an abscess forms in the interior of the eye; the first symptom indicating which is some degree of œdema on the fore part and one side of the eye-ball, immediately behind the ciliary attachment of the iris; but such cases are not common. With respect to prognosis,—it is in general favourable, unless when the mild and insidious nature of the attack induces the patient to delay seeking relief.

Mr. Hewson next adverts to the constitutional symptoms of lues, which are commonly found in conjunction with this form of ophthalmia: he is of opinion that this will generally be most severe where the constitutional symptoms produce most disturbance; and that it assumes a more exasperated form where no mercury has been given for the cure of the primary symptoms.

Venereal ophthalmia is commonly accompanied by some form of eruption, or affection of the throat: the eruptions most usually attending it are the scaly and papular; but he believes that it may be associated with any general symptom, or exist independent of any. This latter circumstance we are inclined to think very rare, and believe that most cases, closely examined into, would exhibit some other form of disease in conjunction with it.

The general appearance of a patient labouring under these various symptoms is so striking, that we need only say that it is well described by our author. Among women, it is to be recollected that sometimes the only circumstance connecting this symptom with syphilis, is their having had repeated abortions, or still-born children.

On the subject of exciting causes, we find nothing to extract; and we therefore proceed to enumerate some affections of the eye, with which our author conceives this disease may be confounded. The first of these is idiopathic inflammation of the iris: and here we must confess that our author's diagnostic signs appear to be of little practical utility; for, to judge of the different nature of a disease by its different termination, would be but poor satisfaction to the sufferer. In fact, Mr. Hewson himself confesses that the state of the patient's general health, and the history of the case, must be investigated. It appears that, in Ireland, the necessity of making this inquiry has been peculiarly strong, from the circumstance of iritis having frequently occurred as a sequela of typhous fever. Secondly, from inflammation of the capsule of the aqueous humor, the venereal ophthalmia has been discriminated by Mr. Wardrop; and we do not find our author adds any thing material to what that gentleman has pointed out: the same remark applies to rheumatic ophthalmia. Our author doubts the existence of arthritic ophthalmia: at least, there can be but little fear of mistaking this for the disease now under consideration.

In considering the ophthalmic symptoms caused by mercury, we find Mr. Hewson controverting the opinion of Mr. Travers. He appears to think that it is the inefficient, or merely alterative, exhibition of mercury, when the patient is placed under no restraint, that causes the frequent recurrence of this, as well as many other constitutional symptoms of the disease; and that

iritis is by no means a frequent result of the constitutional use of mercury: on the contrary, he says, that these symptoms are of a very distinct and different nature; the external structures of the eye being more commonly affected by it, and the conjunctival ophthalmia, especially, being prolonged and exasperated by its use. We shall scarcely do our author justice upon this much-contested point, without giving in his own words the concluding remarks on this subject:—

"The effects which I have above ascribed to the morbid agency of mercury, are of a nature peculiarly liable to escape observation; and probably from thence have not been at all attended to. I would not be understood as maintaining that they are often the consequence of a short and temporary use of mercury, though in some instances this too was observed; but I have found them so repeatedly resulting from a negligent and protracted exhibition of it, particularly where it was not calculated to act as a remedy, that I could not avoid taking this opportunity of fully stating my views on the subject; more particularly as it is much inculcated, and generally believed, that the constitutional use of mercury may be resorted to, not alone with impunity, but advantage, in all species and states of ophthalmia. If, however, the observations that I have made are well founded, this must appear to be a practice productive of very extensive mischief, and should be guardedly refrained from.

"From what I have also stated above, the differences between the ophthalmic symptoms directly and exclusively dependent on the constitutional use of mercury, and those we have seen attending syphilis, will be sufficiently evident. However, in those complicated and anomalous cases, which are but imperfectly known to us under the title of pseudo-syphilis and other denominations, and in which I believe there are grounds for suspecting that the syphilitic and mercurial poisons are often operating on the system at the same time, we shall frequently find syphilitic symptoms, or symptoms precisely similar to them, attacking the eyes as they do other parts. It is here extremely difficult, if not impossible, to form any diagnosis; but, at the same time, this is not necessary; for we must always treat ophthalmic symptoms occurring under these circumstances, and of this nature, as if they were of a genuine and unmixed syphilitic origin.

"It is, therefore, to be observed, that the plan generally adopted, and which experience fully sanctions, of withholding mercury in most cases coming under the description of pseudo-syphilis, is to be deviated from when any symptoms, however remotely, characteristic of a venereal nature, attack the eyes: for, if we here wait the slow effects of any other treatment than that with mercury, these delicate organs will, with certainty, sustain irreparable injury." (P. 53—55.)

We come now to the mode of treatment recommended by our author, which will not detain us long. It fortunately happens that a judicious use of mercury overcomes this symptom, as speedily and as certainly as any that are found to accompany the lues venerea. Mr. Hewson reprobates the employment of

the corrosive sublimate, as practised and recommended by many continental surgeons, and we join him in this opinion; yet we think sometimes, when we have been anxious quickly to produce the effects of mercury, we have found it advantageous; but we would not rely upon it as a mode of cure. Neither bleeding nor blistering are of any avail in this disease. Stimulating collyria also aggravate the sufferings of the patient; and, if any local application be found necessary, the poppy fomentation will generally be found to be the most grateful. Mercury, therefore, is the grand remedy; and confinement can less be dispensed with than in that of any other symptom of lues. We are to recollect that, when the morbid action is removed, and the functions of the eye are restored, the exhibition of mercury must not be stopped, but this remedy must be persevered in until the constitution is cleared of the poison.

Our author concludes this portion of his work with some remarks upon Mr. Travers' opinion, that all forms of iritis require the constitutional use of mercury for their cure, without exception. Mr. Hewson thinks, on the contrary, that many cases of iritis depend upon disorders of the digestive functions, or upon morbid excitement or action of the brain, and is therefore anxious to restrict the use of mercury in this form of disease to the most precise limits. We confess that we are not convinced by what our author urges upon this point. That there may be such cases as he mentions, we do not deny; but we still think that, in the treatment of iritis, from whatever cause, mercury will be found to be the sheet-anchor.

We regret that we cannot insert any of the very interesting cases that close this volume; but we regret it the less, because we have said enough, we hope, to induce our readers to turn to the original work; from the perusal of which, our short and imperfect analysis cannot, and ought not, to exonerate them.

ART. IV.—*Observations on Fever.* By R. WADE, Member of the Royal College of Surgeons, and Apothecary to the Westminster General Dispensary.—8vo. pp. 83. Burgess and Hill, London, 1824.

THIS little volume comes before us in a very unassuming manner, and, with little pretension, contains more practical information than many, the title-pages of which constitute a little essay, setting forth all that the book does contain—and much which it does not. If, therefore, the work which we have placed at the head of this article be no rival to the classical volumes of BATEMAN and ARMSTRONG, so neither does it provoke the comparison; being both intended and fitted for the perusal of students, who either have not the opportunity of reading,—or, reading, fail "inwardly to digest" the stronger

intellectual repast which the writings of these authors contain. It is with a view of drawing the attention of the junior members of the profession to an Essay designed and calculated for their advantage, that we give it a place thus early in the commencement of a new season of study—and it is to be hoped of improvement. The motives which induced the author to become a candidate for public attention, as well as his general views regarding the treatment of fever, will appear from the following quotation:—

"In offering the following observations to the notice of students, for whose use they are expressly intended, I must beg to explain my reasons for thus occupying their attention. Having been constantly with pupils during the last five years, I have had various opportunities of ascertaining their opinions of disease. When questioning them as to their views regarding the theory and practice in fever, scarcely any of them have been at all decided in the course they should adopt, not knowing which of the many theories, and consequent modes of treatment, to prefer. Blood-letting has great charms with most students; there is at once a boldness and decision in the remedy, which pleases them; besides, it is surgical. It has appeared to me, of late, that their great error has been to treat fever more like a mere local inflammation, than as a disease which is probably to last for two or three weeks, and perhaps longer. Even the works of Clutterbuck and Armstrong, which have so much improved the pathology of fever, (and which cannot be spoken of too highly,) are quoted by pupils as a sanction to their most daring achievements with the lancet. We are all too apt to run into extremes, instead of prudently adopting the maxim of the poet—"Medio tutissimus ibis." To cause the student to reflect well as to what extent he may safely carry bleeding in continued fever,—to call particularly his attention to all those remedies which will frequently prevent the loss of blood,—and more especially to impress on his mind the wide difference between the treatment of a simple local inflammation and continued fever, has been a great object in the ensuing remarks." (*Preface*, p. v. vi.)

After some preliminary remarks, written with considerable force, to enjoin industry and perseverance in study, with the remark, that the "plodding man frequently grows fat, whilst the man of genius starves," Mr. Wade proceeds to give a rapid sketch of some of the systems which formerly prevailed in the schools; in the course of which, he takes occasion to inveigh against the humoral pathology, as an "unintelligible jargon," and leading to "injurious practice." That this doctrine was rendered unintelligible by the complicated refinements of its cultivators, and even led to injurious practice by the hypothetical views of disease which it consequently gave rise to, we acknowledge: yet we are free to confess that, in our opinion, there are many principles of the humoral pathology, which, however unfashionable, are nevertheless founded in truth, and capable of useful practical application.

The disadvantages resulting from limited views of disease, and from the exclusive devotion to the fashionable theory of the day, or the authority of favourite teachers, are forcibly, but not too strongly, described in these words:—

"The man who regards a disease with any particular theory, may be compared to one who surveys different objects through a coloured glass, when, however various their hues may in reality be, still each will receive a peculiar tint from the medium through which they are surveyed. I do not mean to say that it is impossible to establish any general principles in fever, but merely that they should be received with great caution, taking care to make them subservient to facts, and not, as is too frequently the case, making facts give way to theories.

"Considering, then, the difference of fevers, and the variety of organs that may suffer, surely it is a most dangerous thing here to generalize much; for, although to the man of experience it may do little harm, as he will rather be guided by his practice than theory, yet on the young practitioner it will produce a very different effect; for early impressions are not easily effaced, and he will besides naturally feel a wish to support the doctrines of his teacher.

"Every young man, when first entering on the practical duties of his profession, and encountering its fearful responsibilities, must have met with many a bitter disappointment in practice, finding in every day's experience too many of our boasted remedies falling far short in virtue to what his reading had taught him to expect. He has read the best descriptions of, and attended the best lectures on diseases; their remedies, perhaps, are as familiar to him as their symptoms. He knows the structure of the human body,—the accidental injuries to which it is subject; can describe with accuracy the different operations which may be performed for their cure. With all this knowledge, however, he will be like one who has read the best descriptions of a country, the customs and manners of its inhabitants; yet, never having himself travelled through the parts of which he has read, should occasion call upon him to visit them, he will not only find many things to learn, but that he has also formed many erroneous conclusions, which a minute survey of the country, and a continued observation on the character of its inhabitants, can alone enable him to correct.

* * *

"Different writers, and those men of the greatest genius, have given us laws by which to regulate our practice; yet their very genius has frequently led them astray, and, by entering into wide speculations, they have done more harm by influencing the practice of their less gifted brethren, than good by their many valuable observations. The science of medicine has seldom been much advanced by imagination, and the plain narrator of facts will do more real good than the framer of systems. In youth, when fancy reigns uncontrolled by experience, and caution has little sway, theories are most dangerous; for the mind embraces them with eagerness, and, as it were, at one grasp arrives at conclusions which years of toil would not, perhaps, enable it to obtain.

"The student is, indeed, placed in an awkward situation as regards his practice in fever, so very opposite are the treatments recommended by different writers: one tells him to bleed largely at the commencement of typhus, and that, as he diminishes the excitement in its early stage. so will he prevent the ensuing debility;—another will tell him that, should he bleed in typhus, he will kill nineteen patients out of twenty: this last writer, no such friend of Sangrado as the preceding one, quite damps his ardour for the use of the lancet. Perhaps a third, being very fond himself of using the cold affusion, will highly extol this remedy, and advise him to rely chiefly upon it; pursuing, at the same time, the antiphlogistic plan strictly. From reading the successful result of the practice of this last author, ascribed almost entirely to the cold affusion, and being more than ever impressed with the virtues of cold water, (its simplicity also recommending it,) he will probably determine to adopt this practice. It may so happen that the very next author he reads will quite freeze all this cold-water mania, and frighten him out of its use, by saying, if he ever have recourse to the cold affusion, which it is not often safe to do, that it reqnires great caution in its management. He will also tell him that many patients have never recovered from the shock occasioned by it, not having sufficient powers for the necessary reaction; or, if there be sufficient power, that it frequently does great harm, by occasioning a determination of blood to some internal part, whose vessels are in a weak state, and thus gives rise to local disease. One would naturally suppose that all difficnlty on the part of the student would be got over by comparing the different methods of treatment, and of course adopting that which was most efficacious; yet, however extraordinary, each writer, for the most part, brings forward such strong evidence in favour of his particular plan of treatment, that the reader is as much in the dark as ever as to which he must pursue, and is, in fact, left to the sage conclusion that all are equally good." (P. 10—14.)

To lay the views of the author before our readers in succession, could only be done by compressing still more that which is sufficiently concise already; we, therefore, pass over some brief, but judicious, remarks upon contagion and the effect of charms,—upon the brain and nerves, as connected with fever,—upon the morbid appearances found on dissection,—upon the difference of fevers,—their usual symptoms, particularly delirium and coma,—upon the prognosis,—and, lastly, the treatment. After general remarks upon this last subject, the author proceeds to their illustration, by giving an imaginary case.

"Suppose we are called to a patient in a respectable situation in life, accustomed to good living, and enjoying generally a good state of health;—let us further suppose that there is no reason to regard his fever as epidemic, or as having arisen from contagion;—he complains of considerable pain in the head, his countenance is flushed and anxious, pulse hard and quick, besides the symptoms usually attending fever.

In this case no doubt can be entertained as to the propriety of general bleeding, which should immediately be had recourse to, until the patient complains of feeling faint, or the arterial action be considerably reduced. The next object in view is to remove the contents of the stomach and bowels, knowing that the different secretions acting as solvents of the food, and assisting in its digestion, are now interrupted, or suppressed; and, consequently, that the contents of the alimentary canal must act as a source of additional irritation to that which already exists. An emetic should, therefore, be given; and, if the arterial action be strong, one which tolerably reduces the powers of the system ought to be preferred: —perhaps, to an adult, either of the following will be as good as any for this purpose:

℞. Antim. Tart. gr. ij.
Sacch. alb. ℈j. M.

or, ℞. Antim. Tartar. gr. j.
Pulv. Ipecac. gr. xv. M.

They should be given in a wine-glass full of warm water; and, when beginning to operate, the patient should also be desired to drink freely of warm water.

"As soon as the stomach becomes quiet, a purgative should be administered.

1. ℞. Hydrarg. Submur. gr. vj.
Pulv. Jalapæ, gr. x.
Pulv. Zinjib. gr. ij. M.

2. ℞. Hydrarg. Submur. gr. iv.
Pulv. Rhei, gr. viij.
—— Zinjib. gr. ij. M.

3. ℞. Pulv. Antimon. P. L. gr. v.
Hydrarg. Submur. gr. iv. M." (P. 49, 50.)

We prefer the second emetic to the first, as, according to our experience, free vomiting is more likely to be excited by the addition of ipecacuanha, than by the larger dose of tartarized antimony;—and the third purgative would have pleased us better, had the pulvis Jacobi (veri) stood in the place of the pulvis antimonialis. Nothing appears to us a greater mistake than the general opinion, that these two antimonial preparations are similar, and capable of being advantageously used as substitutes for each other.—But to proceed.

"We must now endeavour to determine to the skin, and keep up a gentle action of the bowels; in short, to keep down the arterial action as much as circumstances may require: either of the following mixtures will answer our purpose:—

1. ℞. Potassæ Nitrat. ʒj.
Træ. Digit. fʒj.
Vin. Colchici fʒij.
Aq. distillat. q. s. f℥viij. M.

Sumat cochl. iij. magna tertia vel quarta quaque hora.

2. ℞. Sulphat. Magnesiæ ℥j.
Antim. Tart. gr. ij.
Aq. distillat. f℥viij. M.
Sumat cochl. iij. magna tertia vel quarta quaque hora.

3. ℞. Magnes. Sulphat. ℥ss.
Potassæ Carbon. ʒjss.
Succi Limon. q. s. (ad saturandum)
Vini Antim. Tart. fʒj.
Aq. distillat. q. s. f℥viij. M.
Sumat cochl. iij. magna tertia quaquæ hora.

"If the symptoms of excitement run high, the second mixture will be the best; if not, either of the others: the quantity of magnes. sulphat. or antim. tart. will, of course, be varied as the state of the bowels or nausea may indicate. A little syrup may be added, should the practitioner think it an improvement: he will not, however, be able to make them very palatable; but let him be guided by his taste." (P. 51, 52.)

Of these mixtures we greatly prefer the second as a prescription of general utility, having but little faith in the power of digitalis or colchicum, under such circumstances. If the pain continue at our next visit, and the pulse be still quick and hard, we are advised to draw more blood from the arm, and continue the same medicines; and if, on the following day, the pain in the head and excitement continue, leeches are to be applied to the temples. In addition to which means, the cold affusion may be had recourse to, if the heat be steadily above the natural standard, and there be no local determination. We cannot follow this patient further, but proceed to contrast him with the second example.

"Let us, for another example, imagine the same patient having the symptoms just described; but, instead of his fever arising from cold, fatigue, or other causes, we have every reason to conclude that it is epidemic, or proceeding from contagion,—what difference would this make in the treatment? If called as early as in the first case, we may commence with the same measures,—that is, the bleeding, followed by an emetic and cathartic; but the next day, instead of general bleeding, it will be better to rely upon cupping or leeching, unless active inflammation be going on in the brain, or other organ of considerable importance, which may force us to adopt both general and local bleeding. One of the mixtures ordered in the first case should be prescribed; and here those remedies which assist in reducing arterial action are very valuable. Small doses of calomel, with James's powder, or the pulvis antimonialis P. L., may be given at bed-time. The same rules as before must guide us in using the cold affusion: in short, every means which can prevent the necessity of employing the lancet should be had recourse to, we must be as well prepared as possible to meet a typhoid stage; knowing that fevers arising from contagion have a tendency to assume a low character. In this case, suppose that the treatment adopted has appeared to reduce the general excitement; but, instead of the pulse

becoming softer and less frequent, it is equally quick, although diminished in force, and of a wiry or thrilling character; that the secretions, instead of returning to a more healthy state, become more vitiated, the tongue is now covered with a brown fur in its centre, and perhaps red around its edges; the general restlessness is changed to a listless state; the feculent evacuations are fetid and slimy; the mental actions, instead of being more excited, are now more languid: here then we have typhoid symptoms, and, when once these are established, I much question whether general bleeding be admissible, although inflammation may appear almost imperatively to demand it, and even local bleeding must be used sparingly; but it is, perhaps, one of the most difficult points in practice to decide as to the propriety of bleeding when a patient is threatened with extreme debility on the one hand, and on the other with severe local inflammation; it is one that great experience and observation can alone decide. In this stage either of the following mixtures may be given, varied according to circumstances:—

℞. Acid. muriat. f℥ss.
Aq. distillat. f℥viij. M.
Sumat cochl. duo magna 2dis. vel 3tiis. horis.

℞. Sp. Æther comp. f℥ij.
Liq. Ammon. acet.
Mist. Camph. āā f℥ij.
Aq. distillat. q. s. f℥viij. M.
Sumat cochlearia tria magna tertia quaque hora.

℞. Potassæ Carbon. ℥jss.
Succi Limon. q. s. (ad saturandum)
Sp. Æther Nit. f℥ij.
Aquæ distillat. q. s. f℥viij. M.
Capiat cochl. iij. magna tertia quaque hora." (P. 55—57.)

These mixtures are well adapted to the circumstances described; but, in general, the decoct. hordei will be found a more eligible vehicle for the muriatic acid than the plain distilled water. Mr. Wade does not conclude the treatment here, but goes on to inform us, that if, notwithstanding these remedies, the patient falls into that state known by the expression collapse, we must have recourse to the free administration of stimulants, such as wine, brandy, ether, tincture of opium, &c.

A third case is put, into the particulars of which we cannot enter; it is descriptive of fever as it occurs among the poorer classes of society in large cities. Some observations follow on particular remedies; and we agree with all that is said of emetics, cathartics, calomel, blisters, opium, and wine: respecting colchicum and digitalis, as remedies in our common continued fevers, we have already expressed our opinion.

The work concludes with general directions for the management of the patient, and, what is sometimes more difficult—for the management of the nurse. These are good, and contain

many little points of real importance, although too little attended to in general.

In conclusion, we beg to state our conviction, that the remarks of Mr. Wade have been deduced from accurate observation at the bedside of the patient, and consequently are likely to assist those who would study disease as it occurs in nature, and who do not confine their knowledge to the descriptions of it given in their books.

DIVISION II.

FOREIGN.

ART. V.—*Recherches nouvelles et Observations pratiques sur le Croup, et sur la Coqueluche, suivies de Considerations sur plusieurs Maladies de la Poitrine et du Conduit de la Respiration, dans l'Enfance et dans la Jeunesse.* Par THEODORE GUIBERT, Docteur in Médecine de la Faculté de Paris, &c. &c. &c.—8vo. pp. 326. Paris: chez Béchet. 1824.

New Researches and practical Observations on the Croup and Hooping Cough, followed by Observations on numerous Diseases of the Chest and Windpipe, in Infancy and Youth. By THEODORE GUIBERT, &c. &c.

OF all the diseases to which children are obnoxious, there are few, if any, which more imperatively demand the utmost attention of the practitioner, than those which are treated of in the present volume. Notwithstanding the various works which have been presented to the profession upon these complaints, there still exists much discrepancy of opinion as to the best mode of treating them, and even their very nature is not unfrequently a subject of dispute. It is not the intention of Dr. GUIBERT to give a complete treatise upon these affections: he proposes merely to state the result of his practical experience; and, from having been connected with an extensive establishment which is dedicated to the diseases of children, his opportunities have been necessarily greater than the private practitioner can generally enjoy. We have now to examine the use he has made of these opportunities, and to present to our readers a condensed view of the volume before us. It is divided into three parts.

The first part treats exclusively of Croup. The various denominations which have been applied by different writers to signify this disease, are first enumerated, and we then enter upon the practical observations of our author. Croup he considers to be almost exclusively a disease of infancy. It is characterized by the acuteness of its progress, and the invariable

tendency to form a false membrane in the interior of the trachea. The seat of croup is stated to be in the mucous membrane which lines the respiratory canal, from the commencement of the larynx to the first division of the bronchiæ. The inflammation may invade the whole extent of this membrane, or only attack a part of it, as has been demonstrated by post-mortem examinations. That the inflammation of croup is exclusively confined to the trachea and bronchiæ, is the general opinion. The investigations of Dr. CHEYNE* and Dr. BAILLIE,† however, have proved that it not unfrequently extends to the lungs, and produces extensive and irremediable mischief. Dr. Guibert considers the nature of croup to be essentially and primitively inflammatory, and does not think it possible to admit a nervous species of croup, which is unattended by inflammation; for, he observes, "the very nature of the symptoms,—the fever, the local pain, the swelling of the neck, the redness of the mucous membrane lining the air-passages, which dissection has constantly detected, and the production of the adventitious membrane in the trachea, all indicate an inflammatory action from the very commencement to the termination of the disease." This we believe to be a very correct view of the nature of croup. That it is always essentially an inflammatory disease, we have no doubt, notwithstanding the frequency with which we hear, in practice, of cases of "spasmodic croup." But, although such is our opinion of the essential characteristic of croup, we believe that many of the fatal cases which occur, in the second stage of the disease particularly, at a moment when we have every reason to believe that the severity of the disease has been checked, must be attributed to spasm of the muscles of the glottis, rather than to the intensity of inflammatory action. We are aware that this opinion has been strongly opposed by very respectable authority; but we are unable to account for the occasional occurrence of *sudden* death in cases of croup, which we more than once have had reason to lament in our own practice, when we flattered ourselves, from the subsidence of the inflammatory symptoms, that we had conquered the disease.

In common with most other authorities, M. Guibert is of opinion that croup is never a contagious disease. It frequently exists as an epidemic; and in cold and humid countries, which are exposed to sudden vicissitudes of temperature, it is sometimes endemic.

There are many anatomical and physiological circumstances, which tend to render croup so much more frequent in children than in adults, and to give to the disease its pathognomonic symptoms. Such are, particularly, the imperfect development

* *Pathology of the Membrane of the Larynx.*
† *Morbid Anatomy.*

of the air-passages, and of the glottis especially; the great sensibility of the mucous system in general, in which the membrane of the respiratory canal participates; the extreme difficulty of expectoration in children, which favours the accumulation of the mucous secretion, and gives rise to the obstruction of the bronchiæ; the activity of the circulation, which explains the easy development of inflammatory affections at an early age, as well as the severity of the symptoms, and the rapidity of their progress. "Croup attacks indifferently children of both sexes, and almost as frequently the feeble as those who enjoy a robust constitution."

Among other exciting causes of the complaint, which our author enumerates, he mentions the introduction of a foreign body into the larynx or trachea. That genuine croup should ever arise from this cause, is very improbable. Much distress will necessarily be occasioned by the presence of any foreign body in so irritable a canal. Inflammation may occur, and the respiration may be obstructed; but still the case will want the pathognomonic symptoms of croup.

"Croup, it is stated, frequently succeeds to catarrhal affections, to hooping-cough, to measles, scarlatina, and small-pox." Practice, says M. Guibert, furnishes us with daily examples of this sort. That croup may occasionally be consequential to these disorders, we are not prepared to deny, but we doubt the frequency of the occurrence. Our experience in these diseases has not been trifling, and we do not recollect a single case of genuine croup succeeding to any of them. It is very common for children, during the eruptive stage of measles and scarlatina, particularly if there is much inflammation of the throat, to be suddenly, and without any exacerbation of the symptoms, attacked with a peculiar croaking noise in breathing, which somewhat resembles that which is characteristic of croup. This symptom, however, passes off spontaneously. From dryness and irritation of the larynx, this kind of stridulous breathing very frequently occurs in children; and we have known many instances in which much alarm has been excited, and an active mode of treatment inflicted, when it was perfectly unnecessary. The practical tact of M. Guibert would, we doubt not, prevent him from falling into the error of believing the case to be croup, from the accidental occurrence of this individual symptom.

From the commencement of croup, the voice of the patient is altered; it is hoarse and croaking. There is a painful, burning sensation, and a feeling of constriction in the larynx and trachea; deglutition, however, is not impeded: the respiration gradually becomes laborious and sonorous. Many attempts have been made to define the peculiar noise that is made in breathing, by different comparisons. The practitioner can only

become acquainted with it by hearing it, and, when once it has caught his ear, it will not be forgotten. A cough succeeds by paroxysms, which is at first dry, and subsequently attended by expectoration. Fever set in early in this disease; and the general symptoms rapidly increase in severity. The anxiety becomes excessive; the cough more frequent and painful; the patient discharges from the mouth a viscid, frothy fluid, sometimes tinctured with blood, but generally white. This fluid increases in opacity and consistence. The child sometimes throws forth albuminous concretions, resembling a tube, or portions of membrane: their expulsion is not affected without much difficulty and distress, and occasionally vomiting takes place; but, when once this adventitious membrane is discharged, a temporary alleviation of the symptoms almost always follows. At a more advanced period of the disease, the symptoms are still increased in severity, and the unfortunate little patient exhibits a melancholy picture of suffering, which we can rarely alleviate. Respiration is almost entirely impeded; the head is thrown backwards; the anxiety of the child is now at its highest degree; the agitation is extreme. The movements are sudden, irregular, and convulsed. The face becomes of a dark blue colour; the eyes appear unnaturally prominent, are turgid with blood and suffused with tears, and are incessantly rolling in their orbits. The pulse intermits, and disappears entirely under the slightest pressure of the finger. The voice is gradually extinguished, and death soon closes the scene.

The progress of croup is not always regular: an exacerbation of the symptoms frequently occurs towards night; and sometimes, when the death of the child appears inevitable, an unexpected remission takes place. The ordinary duration of croup is from three to six days: very acute cases not unfrequently terminate fatally within twenty-four hours.

The appearances observed upon dissection are—redness of the mucous membrane of the air-passages, an increased secretion of mucus, and layers of membranous concretions, very much resembling those which are produced upon the surface of inflamed serous membranes. Sometimes these adventitious membranes extend as far as the epiglottis, and even line a part of the pharynx. They vary much in form and consistence. Gangrene of the parts affected rarely takes place.

Our limits oblige us to pass over some interesting observations upon the occasional complications of croup.

Treatment.—In the first stage, the disease presents but one urgent indication—that of opposing the development and progress of inflammation, by the usual antiphlogistic means. M. Guibert particularly recommends the very frequent use of warm

baths, in this as well as in every other case of intense inflammation in children. The directions for the application of leeches appear too indefinite. We are called upon to bleed freely, both locally and generally; but a somewhat more precise guide for the young practitioner would be required, than the option of applying from five to twenty leeches. We are directed to keep the bowels open by enemas; but, for our own parts, we should be more inclined to depend upon calomel and powder of jalap, or scammony.—In the second stage, we have not only to contend with inflammatory action, but we have also to endeavour to procure the expulsion of the mucous or membranous secretion from the bronchiæ and trachea. Some authors have proposed to admit two other indications: to dissolve the false membrane when it is already formed, and to oppose the debility which threatens to take place. Dr. Guibert properly cautions us against the employment of tonics and stimuli in this stage of the disease, notwithstanding they have been very strongly recommended. The debility occurs either from the treatment of the first stage having been carried beyond the point which the powers of the patient are able to bear, or from the local inflammation having arrived at its highest degree of intensity, from the neglect of proper treatment. In the second stage, bleeding will still be required, both locally and externally, in proportion to the severity of the symptoms; and repeated emetics of tartarized antimony are now very strongly indicated. During the efforts of vomiting, the air-passages will be cleared from the morbid secretions which are productive of such danger and distress. The decoction of seneka is considered by our author to be a useful expectorant. There must, however, be considerable difficulty in administering this medicine to children in efficient doses.

Various remedies have been recommended to dissolve the false membrane which is formed,—such as fumigations of volatile alkali, muriate of ammonia, &c. Even the inhalation of chlorine has been advised! These experiments are justly deprecated, as highly improper and dangerous. By many practitioners, the sulphate of potash is highly esteemed as a remedy capable of dissolving the false membrane. Dr. Guibert is apprehensive of its effects in young children, if it be freely administered; and appears sceptical as to its supposed virtues, however judiciously it may be given: he prefers the subcarbonate of potash in small doses. Calcined magnesia is thought to act in the same manner. Of the free and repeated use of calomel, as it is employed in this country, the author speaks rather from report than practical experience; although he admits the efficacy of calomel as a purgative.

To calm the nervous excitement, we are advised to use valerian enemas, and to give the extract of valerian internally. We should ourselves prefer hyoscyamus or conium, and confess we should not hold ourselves justified in wasting time in the exhibition of valerian glysters. Opium is condemned in every form. Blisters are to be applied to the neck, and mustard sinapisms to the feet and legs, in the second stage.

In the third stage, we must exert every effort to prevent suffocation. If emetics are insufficient to throw off the adventitious membrane, vomiting may be excited by the introduction of a feather into the throat. This expedient has been successfully adopted by M. JURINE.

One observation we must add, which may appear trifling, but which is in fact highly important. In every case of inflammation of the larynx or trachea in children, the nurse should be strictly enjoined to watch the patient attentively, and, upon the slightest appearance of mucus in the mouth, to draw it forth by the fingers: the tenacity of the morbid secretion being such, that it is frequently possible to extract long shreds of viscid secretion in this manner; the presence of which has not only been productive of much distress, but has even endangered the life of the patient by suffocation.

The inconveniences resulting from the operation of tracheotomy in the last stages of croup, where death is to be feared from obstructed respiration, have caused it to be generally abandoned, according to Dr. Guibert. In some cases, where every remedy had failed, the operation has been performed in this country with success: we believe, the late Mr. CHEVALIER performed it more than once, with a fortunate result. If we rescue our patient from the acute attack of croup, much attention will be required, during convalescence, to prevent a relapse.

Eighteen cases of croup are detailed, of which three only terminated successfully.

The second part of the volume is occupied by the consideration of Hooping-Cough. Neither the opinion which the author entertains of the nature of the disease, nor the treatment he recommends, differs materially from that of English physicians.

The third part of the work contains many sound practical observations, although, perhaps, it is somewhat deficient in the charm of novelty. It presents a brief sketch of various inflammatory affections of the throat in children, which bear considerable analogy to croup, and are not unfrequently confounded with it.

To attract attention by new speculations and ingenious hypotheses, is not the aim of the present volume. Dr. Guibert has chosen the less imposing, but certainly more useful course, of

simply detailing the results of his own practical experience. By every practitioner the work will be read with interest, although many may find in it nothing more than a confirmation of doctrines they had previously entertained, and the sanction of an able man for a mode of treatment, which does not essentially differ from that generally employed in this country.

MEDICAL AND PHYSICAL INTELLIGENCE.

PATHOLOGY.

1. *Diagnostic between Irritation and Inflammation of the Mucous Membranes of the Bronchiæ.*—M. NAUCHE has remarked that, in the natural state, or where there only exists an excess of irritation, the matters secreted by the different mucous membranes have always a well-marked acidity: while, on the other hand, if these membranes be inflamed, alterations of their vital properties supervene; the nature of the secretion is changed, and becomes alkaline. These two states are easily recognised by a morsel of paper tinged blue by turnsol. When the matter expectorated is acid, the paper is turned red; while it assumes a deeper blue, or is even changed from red to blue, if the matter be alkaline.

M. Nauche has examined the expectoration, with respect to its acid and alkaline character, in the diseases of the respiratory organs. He believes, from this inquiry, that they may be divided into matter produced by irritation,—an increased secretion of the mucous follicles which line the membrane of the air-passages,—and into matter, or expectoration, which results from their inflammation. He has observed that the white, mucous, frothy expectoration, which is frequently brought up in large quantities by persons in a state of agony, has always an acid character, when the air-passages have not been the seat of previous disease. This character is likewise found in the white, frothy expectoration which occurs during the whole continuance of pleurisy, whether acute or chronic; and at the commencement of pneumonia, when the matter expectorated is white, or even yellow. It is often lost in the course of this disease, and re-appears towards its decline. The acid expectoration is likewise found in emphysema of the lungs and scrofulous phthisis, when the tubercles are but little developed,—in the state called crude. It is evident, in all these cases, that the mucous membranes which furnish the expectoration are only in a state of increased excitement, and that they are in no degree inflamed. M. Nauche has likewise found acid expectoration in certain advanced cases of phthisis. He believes that this depended upon these matters being the product of an increased secretion of the mucous membrane lining the excavations formed by the tubercles.

The expectorated matters, on the contrary, are always alkaline in inflammation of the mucous membrane of the bronchiæ, and in all the

cases designated by the names of acute and chronic colds, or mucous phthisis *(phthisis muqueuses)*. Although this expectoration is not regarded as purulent, it is nevertheless a kind of pus peculiar to inflammation of these membranes, and analogous to the purulent serosity which is furnished by serous membranes when in a state of inflammation.

The expectoration likewise becomes alkaline in peripneumony, when the inflammation of the pulmonary tissue communicates itself to that of the mucous membrane of the bronchiæ; and this secretion is the product of the inflammation of these two tissues.

The expectoration is likewise alkaline in phthisis pulmonalis, in the second or third stage, when the tubercles become broken down. It is usual, in such cases, to find the internal membrane of the lungs deeply altered.

It frequently happens, particularly among phthisical patients, that both these kinds of expectoration are to be found in the same vessel. That which results from an augmented excitement comes up most easily, —is white, frothy, and acid; the other is brought up with difficulty, is yellow, thick, and alkaline. In this disease, when the patient has only the former kind of expectoration, his life is often in the greatest danger.

These remarks are extracted from the work which is reviewed in the foreign department of the present Number.

2. *Hydrophobia.*—Dr. CAPELLO, of Rome, in a Memoir read before the Academy dei Linæi, affirms that the hydrophobic poison, after its first transmission, loses the power of conveying the disease. This remark, already pointed out by BADER, is confirmed by repeated experiments made by Dr. Capello, both upon dogs and other animals. A lap-dog and cat were both inoculated with the saliva of a dog, who died of *inoculated* hydrophobia: they both remained free from disease; and three years afterwards the lap-dog was again inoculated, from a dog who became rabid *spontaneously:* he then took the disease, and died.

An ox was bitten by a dog attacked with rabies; he became hydrophobic, and bit many other animals: all remained free from the affection. The dog that bit the ox also bit a child, who died about four months after, with all the symptoms of hydrophobia: with the saliva of this child a dog was inoculated, but the disease was not transmitted.

Dr. Capello relates one more history in confirmation of this fact, and which is very strong, inasmuch as the animal, which was bit by another dog belonging to the same person, becoming hydrophobic on the fifty-first day, broke the chain with which he was fastened, and escaped into the street, where he bit many persons, and the dogs of two persons (who are named), and finally disappeared among the ruins of the villa of Quintelius Varus. Not one of the persons so bitten, nor even of the dogs, had the slightest symptom of hydrophobia.

Dr. Capello gives us no satisfactory account of the origin of the spontaneous hydrophobia, which he would endeavour to persuade his readers is caused by the violence of the venereal appetite in the canine species, when restrained from indulgence. He also informs us that he

has not been able to verify the observations of Dr. MAROCHETTI, relative to the pustules under the tongue; and, on this point, he therefore agrees with the physicians of Wirtemburg, who, by the desire of the College of Medicine, were ordered to examine the tongues of those men and animals who were the subjects of the disease throughout that kingdom.—(*Annali Universali*, Guigno.)

3. *Case of Menstruation from the Mammæ.*—M. BUTTNER, a practitioner at Halberstadt, has recently published a case of this kind. It occurred in an hysterical woman, who experienced the ordinary symptoms of menstruation, which went off after she had evacuated five or six spoonsful of sanguineous fluid by the nipples. This process usually lasted about six days, and was succeeded by a white mucous discharge from the same parts; which however were, during the whole time, neither swelled nor painful.—(*Journal der Praktischen Heilkunde*, Junius.)

4. *Pathology of Phlegmasia Dolens.*—M. VELPEAU has related three cases of this disease, in all of which some alteration, more or less considerable, was found at the sacro-iliac symphysis of the same side on which the limb was affected; purulent effusions in the peritoneum, particularly about the genital organs; abscesses in the diseased limb; and, lastly, a mixture of pus and coagulated blood in the veins of the limb, with evident traces of inflammation of their coats, in two of the cases. M. Velpeau regards the alteration of the symphyses as the original source of the disease, which afterwards becomes extended to the limb: the veins, according to him, being only consecutively affected, whether the pus in their cavities may have been originally formed there, or introduced by absorption. The veins were incompletely obliterated.

These facts agree with the observations of M. BOUILLARD on the causes of certain kinds of dropsy; and our readers will find, by referring to our analysis of Dr. DAVIS's paper, in the last volume of the Medico-Chirurgical Transactions, that these cases are in confirmation of his views, although his opinions are not entirely the same as those of M. Velpeau.—(*Bulletin des Sciences Medicales*, Juillet.)

THERAPEUTICS.

5. *Efficacy of Tartar-Emetic Ointment.*—Dr. TONELLI has published an account of his experience of this remedy, preceded, however, by much theoretical reasoning on its mode of action. He asserts that, in forty cases in which he employed this remedy, thirty-one were perfectly restored, four were greatly relieved, and five died. Among the diseases for which he prescribed this ointment, were fevers, pleurisies, chronic catarrhs, rheumatism, *tubercular suppurations*, acute asthma, *two cases of vomicæ*, a threatened pulmonary consumption, *another advanced to its second stage*, and an hydrothorax.

A remarkable instance is also detailed of the perfect cure of a case of insanity by this means. The patient was a woman, forty-five years of

age, in whom insanity succeeded to an attack of fever: all the remedies previously adopted had failed in affording relief, when the tartar-emetic ointment was freely rubbed in, from the crown of the head to the first cervical vertebra; the head being shaved. Under this discipline, nausea was produced, and continued constantly; a large crop of pustules soon appeared; and in two months the symptoms of mental malady had entirely ceased.

The quantity of tartar emetic employed was one drachm and a half to the same quantity of lard, sometimes a drachm to three of the ointment; and the author recommends that the tartar emetic be reduced to an impalpable powder. The parts where he employs the frictions are the epigastrium, the anterior part of the thorax, and at the same time upon the back, between the internal margin of the scapula and the vertebral column.—(*Annali Universali*, Luglio.)

6. *Effects of the Croton Oil.*—Dr. Fenoglio, of Turin, has published a series of experiments on the use of the above-mentioned oil; from which he draws the following conclusions:—

1st. That the effects of this oil are to produce a sense of burning in the fauces, slight pains in the belly, and a general sense of fatigue.

2d. That it may be looked upon as an antiphlogistic of no ordinary powers; but not to be administered where there exists any inflammatory action of the digestive canal.

3d. That it does not possess any diuretic property.

4th. That, generally speaking, in the doses usually administered, it is powerfully drastic.

5th. That, in doses of a drop, it does not produce the violent effects that have been by some attributed to it.

6th. That, where more numerous evacuations have been procured, other purgatives, or glysters, have assisted its action.

7th. That, given in the form of pill, the effect upon the mouth and fauces is avoided.

8th. That it should not be given in solution, as it appears thereby to be imperfect in its action.

So far Dr. Fenoglio's experience extends. We have, immediately following, the result of experiments made in the clinical department of the University of Padua, communicated to us by Pietro Benvenuti, and which appear more in conformity with the experience of the English practitioner. The conclusions this latter gentleman has arrived at are the following:—

1st. That the Croton oil is the most violent of all drastic purgatives at present known.

2d. That this oil produces its effects without the medium of any vehicle (by mere contact).

3d. That the irritation of the fauces produced by it, is always greatest when the oil is least diluted.

4th. That half a drop operates in a much greater degree of proportionate violence than a larger quantity.

5th. That the purgative effects are in an inverse ratio to the irritation produced upon the fauces.

6th. That it is possessed not only of an acrid, but of a caustic quality also.

7th and lastly. That, besides its action on the fauces and intestines, it appears to exert a power over the urinary apparatus, *diminishing* the quantity of urine; and, therefore, the Professor thinks that it may be given with every chance of success in cases of Diabetes mellitus.—(*Annali Universali*, May.)

SURGERY.

7. *New Operation, proposed as a Substitute for the Cæsarean Section.*—M. Baudelocque, nephew of the celebrated accoucheur of that name, proposes to substitute the following method, to which he gives the name of *gastroelytrotomie*, for the Cæsarean operation.

The position is the same usually adopted: the woman is to be placed on an horizontal plane during the first incision, which extends along the outer border of the rectus muscle, from the umbilicus to two inches above the pubis. "In the former of the two methods which I propose, I take care," continues M. Baudelocque, "not to involve the peritoneum in the external incision. I then pierce the membranes per vaginam, so as to remove the waters in this way. I make the legs and thighs be half bent, and pass the forefinger into the inferior angle of the wound, to remove the peritoneum carefully from the whole extent of the iliac fossa; and, when this membrane is entirely detached, an assistant, placed at the right side of the patient, raises up the peritoneum and mass of the intestines; whilst another, placed beside him, maintains the uterus in its position, by applying one hand upon the belly. I introduce the right hand into the abdominal cavity, so as to explore the iliac artery, and then ascertain if there be any arteries surrounding the vagina: if there be any, I apply a ligature at both extremities; and, before cutting them, I take care to recognise the sub-pubian ligament, in order to avoid it. The bladder being emptied by the catheter, if the patient be unable to void her urine, and the rectum by glysters. I smear the left hand with some kind of lard, and introduce it between pronation and supination, parallel to the axis of the inferior orifice, and easily bring the vagina out beyond the external wound. Seizing the bistoury, I cover it with the three first fingers of the right hand, and plunge it into the vagina by the external opening, and as far as possible below its insertion into the neck of the uterus, prolonging the incision to the extent of four and a half inches. This incision being made, the fœtus is expelled, by the contractions of the uterus, into the abdominal cavity, in the same way as happens in rupture of the uterus or vagina. It may be extracted with pincers, or a forceps half as long as that generally employed."

The second method differs from the first only with respect to the peritoneum, which is divided at the same time with the abdominal muscles. "In the left lateral obliquity, I make the external incision on the right side of the belly, and the rest of the operation is rendered more

easy, from the section of the vagina being thus capable of greater extension. In the anterior obliquity, we may operate either on the right side or the left. I replace the uterus; and, when the placenta is detached, I assist its expulsion per vaginam, by pulling it gently by the cord,—not forgetting to support the perineum with the left hand, as in natural labour, and to make only one half of the circumference of the placenta present at the vulva, when it is voluminous. It is unnecessary to say, that the process which I describe would not answer if an exostosis closed the upper isthmus, or if a schirrous tumor of the neck of the uterus entirely occupied the vagina: the same would be the case in a hernia of the uterus."

M. Baudelocque does not conceal any of the inconveniences attached to the operation which he proposes, but he believes it to be much less dangerous than the one for which he would substitute it. Experience will show.—*(Journal Universel des Sciences Medicales,* Juillet.*)*

8. *Experiments on the Treatment of the Itch.*—An extensive series of experiments on the comparative advantages of the different methods of treatment proposed for the itch has been made, under the direction of Dr. MAURY, physician to the hospital of St. Louis. The points to be ascertained were, the length of time required,—the expense of the medicines,—their effects upon the skin,—and their comparative degrees of convenience with regard to the linen of the patients. The subjects of experiment were selected;—that is to say, those only were chosen, in whom the nature of the eruption was quite unequivocal, and who had not previously made use of any external application, nor internal remedy.

Twenty-one formulæ, with their results, are given: we subjoin four of those which appear to have cured the disease in the shortest period.

1. Camphorated liniment, of M. VARDY; composed of two ounces of olive or almond oil, and two drachms of camphor. Mean duration of the treatment, $13\frac{3}{10}$ days. This medicine is too expensive for habitual use at an hospital; it stains the linen; the smell is not unpleasant; it effects the cure without irritating the skin, and the itching is much relieved by the first application. It is recommended as a good remedy for private practice. The compound liniment of M. FOURNIER differs from the preceding only in the addition of two drachms of liquid ammonia, and the combination is favourably spoken of. The medium length of time required for the cure being reduced to $11\frac{4}{10}$ days.

2. Sulphur pomatum, of M. HELMERICK: sublimed sulphur, two parts; purified potass, one part; lard, eight parts. Two frictions are made in the day, using two ounces of the pomatum for each. Mean duration of the treatment, $11\frac{7}{10}$ days. The price of this is moderate; it soils the linen, from the excess of fat over the alkali; has some smell, but does not incommode the skin, and effects a speedy cure. It differs little from the "pommade sulphuro-alcaline," employed at the hospital of St. Louis.

3. Pomatum proposed by M. MELIER: subcarbonate of soda, two

ounces; water, one ounce; olive oil, four ounces; flowers of sulphur, four ounces. Dissolve the subcarbonate in the water, and add the oil, so as to make a soap; then add the sulphur by little and little, carefully mixing it. Of this, two ounces are to be used for each friction, and these to be employed twice a-day. Mean period required for the cure, $13\frac{7}{10}$ days. This method presents the advantage of an oil and alkali united in such proportions as to form a soap, by which means it is prevented from staining the linen, and cures the eruption without irritating the skin. It is not without smell. It is suggested that camphor might be substituted for the sulphur, in the proportion of four drachms to the quantity above mentioned.

4. Sulphureous baths. To a common bath add four ounces of the sulphuret of potass. Mean time required for the cure, $17\frac{3}{10}$ days. This method is very gentle, effecting the cure without inconvenience, but slowly, and not suiting every patient. The bath may be rendered more active, and the cure more speedy, by adding a little sulphuric acid. It is expensive, however, and can scarcely be employed but on a great scale.

5. Sulphureous fumigations. Fumigations with sulphureous acid are employed at the hospital of St. Louis. The mean time required is $21\frac{4}{10}$ days. This method has been too much praised: it is expensive, and produces the cure but slowly. Many patients are unable to support it; it fatigues the chest when the lungs are weak. It is free from odour and uncleanliness; but these advantages do not compensate for the tediousness of the treatment. Spirituous fumigations are still less efficacious.

6. Decoction of tobacco; made by putting two ounces of tobacco in a pound of water, and bringing it to the boiling point. Two lotions were employed every day, consisting of half a wine-glassful each. Mean time required, $20\frac{9}{10}$ days. This method is expensive, and not altogether free from inconvenience, as several instances occurred of nausea and vertigo, while the odour proved harrassing to some of the patients.—(*Journal General de Medecine*, Juillet.)

MIDWIFERY.

9. *Statements relative to the Lying-in Hospital at Florence.*—Dr. Bigeschi, giving an account of the establishment and internal economy of this hospital, which was opened in June 1816, informs us, that, up to the end of March 1824, five hundred women had been delivered in this hospital; four only having died during this period. The number of children born was 506, there being six instances of twins: of this number, 485 were head presentations; the males were 279, the females 227. Three hundred were delivered during the day, two hundred in the night, and twenty-one before the usual term of gestation. Of the whole number, three only presented any defect of formation; two having hare-lips and cleft palates, and one having a malformation of the fingers of both hands, similar to the mother. The heaviest infant weighed

sixteen pounds* four ounces, and the smallest, born at the full period, five pounds; the majority weighed about ten pounds. Of the 506 children born, forty-nine perished: of these, thirteen were still-born; the others died of infantile diseases, within the first few days. In those born before the natural period, the greatest length of the fœtus was always found to be between the umbilicus and the top of the head.

The disease called induration of the cellular tissue attracted Dr. Bigeschi's particular attention. He observed it to be prevalent in the winter, especially if rigorous; in consequence of which, he ordered the infant to be kept in the mother's bed, as warm as possible, and from that time no case of the disease occurred.

Of 486 head presentations, three were extracted by means of the forceps; neither the children nor the mothers suffering any thing therefrom.

Of the four deaths, the first was occasioned by inflammation of the uterus. In consequence of malformation of the pelvis, the child was turned, with the intention of delivering by the feet, but the head being too large to pass, it was necessary to turn it, and it was finally extracted dead. In the second case, the child was delivered by the feet; and the mother, a woman thirty-one years of age, of a sanguine temperament, was seized with symptoms of inflammation of the kidneys the day after, and died on the seventeenth day of the disease: the left kidney, the spleen, and part of the lung of the left side, were found in a state of suppuration; the uterus being in a perfectly sound condition. It is remarkable that this woman had been affected, subsequent to a former labour, with symptoms indicative of the above affections; from which she did not recover for two months. The third death was occasioned by hemorrhage; the woman eight months advanced in pregnancy; the placenta was found adherent to the neck of the uterus. The head presented; the child was turned, and delivered by the feet. Every thing was conducted in the gentlest manner; but the child was still-born. The uterus contracted properly; the placenta was extracted immediately; but the patient, who had swooned at the conclusion of the operation, expired an hour after. The other patient died of puerperal fever, on the fifth day. There was nothing remarkable or preternatural in the previous labour. Dr. Bigeschi adds some observations, confirmatory of the virtues of the *secale cornutum.*

10. *Case of Anasarca combined with Pregnancy.*—Dr. De Felici, of Milan, relates the following very extraordinary case, the leading features of which we give, omitting all his speculative opinions.

Maria Orrigi, thirty-five years of age, mother of two children, had reason to believe herself pregnant in December 1817. She soon perceived a tumefaction of the feet, which rapidly extended to the thighs, the pudenda, loins, and abdomen, attended with great thirst. On the 2d of February following, she was seized with fever, and a pungent pain in the left hypogastric region, and numbness of the corresponding thigh.

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* The Tuscan weight of twelve ounces.

These symptoms were combated by antiphlogistics, bleeding, and digitalis: nevertheless, the thirst continued insupportable; the œdema increased, the tumefaction of the abdomen became enormous; and the desire of making water was so violent and so painful, as in some measure to resemble the pains of labour, the urine only flowing drop by drop. The pain in the thigh and leg had increased greatly; there was great difficulty of breathing, palpitations, a dry cough, wasting of the upper extremities, frequent pulse, a sense of suffocation upon the slightest motion, and tumefaction of the hands and arms, as well as puffiness of the face. Such was the condition of the patient, when seen by Dr. De Felici, for the first time, on the 6th of March. Suspecting retention of urine, but seeing the threatening condition of the patient, the Doctor doubted whether he should perform paracentesis, or introduce the catheter. Fortunately, he chose the latter; and, to the astonishment of every one, drew off from thirteen to fourteen pints of urine: this operation, repeated twice during the day, produced the evacuation of an equal quantity. Nitre and digitalis were prescribed, *(the doses are not mentioned.)*

The next day, the symptoms were mitigated; the catheter was passed twice. In the evening, excepting the fever and thirst, (both of which were, however, diminished,) a change for the better had taken place: the pain in the side was gone, the thigh could be moved, and the œdema of the lower extremities was diminished by one half. The medicine had produced nausea, and was omitted.

On the following morning a purgative was taken, and many evacuations procured; but no urine was passed. The catheter drew off as large a quantity of water as on the 6th inst. About noon, labour took place, which was not followed by the slightest hemorrhage. The placenta was expelled on the following day; and from that hour there was no appearance of the lochia.

The catheter was used every two hours, on the 9th, 10th, 11th, and 12th. On the 13th, the swelling of the abdomen was entirely gone; that of the left thigh was diminishing; that of the right had entirely disappeared: the upper extremities continued still œdematous. In these eight days, 257 medical pounds of urine were drawn off. From the 14th to the 17th, a sensible diminution of the symptoms was perceptible. On the 18th, during a profuse fæcal evacuation, the patient made water for the first time: the catheter was now used every four hours. On the 19th, the patient was without fever. On the 31st, she made water naturally.

April 7th.—The patient rose from her bed, and was restored to health.—*(Annali Universali,* Luglio.*)*

11. *On the Method of counteracting Uterine Hemorrhage, proposed by* Dr. Gooch.—Since the publication of Dr. Gooch's paper, (12th volume of the Medico-Chirurgical Transactions,) on the Hemorrhage which sometimes follows the Expulsion of the Placenta and the Contraction of the Uterus, I have had an opportunity, (says Mr. Crowfoot,) in three cases, of witnessing the good effects of the preventive treatment which he recommends.

Mrs. G., in three previous labours, had suffered from a frightful hemorrhage, which followed the expulsion of the placenta, after an interval, varying in the different labours, of from five to twenty minutes, notwithstanding the uterus had actively contracted. This patient having been again pregnant, I determined to try strict antiphlogistic treatment for five or six weeks prior to her confinement. The consequence was, that she altogether escaped the hemorrhage.

Mrs. A., a lady of sanguine temperament, but delicate constitution, in her two first labours had rather more than the usual discharge after the removal of the placenta. In her third labour, the placenta was expelled as usual, the uterus actively contracted, and no hemorrhage followed for at least twenty minutes, when a most appalling one burst forth, and was with difficulty restrained by the most prompt and continued treatment. In her fourth pregnancy, the antiphlogistic treatment was pursued as in the former case, and with the same satisfactory result.

In another patient, Mrs. L., similar hemorrhages had occurred in two previous labours: in a third pregnancy, the antiphlogistic treatment prevented this inconvenience in the following labour.

In none of these cases did the hemorrhage immediately follow the expulsion of the placenta; an interval of from five to twenty minutes intervened; and I therefore infer, that a degree of relaxation of the uterus preceded the hemorrhage, and was as essential as the existence of the phlogistic diathesis. We find that the only remedies upon which we can depend in these cases, are such as have a tendency to produce firmer contraction of the organ,—the sudden application of cold to the abdomen, steady pressure externally on the uterus, and the introduction of the hand into its cavity. Dr. Gooch found that Le Roux's remedy could not be relied on; and the case which I detailed first, in which alarming hemorrhage took place, into an uterus distended by a seven-months' fœtus and its appendages, would indispose one to trust to the plugging the vagina as a means of restraining a bleeding into a dilatable organ.—*(Edinburgh Med. and Surg. Journal.)*

CHEMISTRY.

12. *Digitaline.*—M. Royer has obtained the active principle of digitalis in a separate state, by the following process:—He digested a pound of the plant in ether, first cold, and afterwards heated under pressure: the solution thus formed was filtered and evaporated; the residue dissolved in water, and likewise filtered. The solution was then treated with hydrated oxyde of lead; the whole evaporated, and digested in ether. On being evaporated, it assumed the appearance of a brownish substance, of the consistence of paste, very bitter to the taste, and extremely deliquescent. Difficulty was experienced in crystalizing this; but, on dissolving it in alcohol, and evaporating it on a piece of glass over a lamp, a number of minute crystals were observed through a microscope. To determine the active nature of this substance, various experiments were tried. A grain was dissolved in 180 grains of

water, and the solution injected into the abdomen of a rabbit: after a few minutes, the respiration and circulation became diminished, and the animal soon died, without apparent suffering; yet rabbits are easily affected with convulsions, from the operation of poisonous substances. Half a grain, in 120 grains of water, injected into the veins of a cat, produced death in a similar manner, in about fifteen minutes; and a dog was killed by a grain and a half dissolved in half an ounce of water, and thrown into the jugular vein.

In these cases the arterial blood assumed a venous appearance, and coagulated with difficulty.—*(Bib. Univer.)*

13. *The Effect of covering Vessels containing diluted Alcohol with Bladder.*—The result of keeping diluted alcohol under these circumstances is, that the water evaporates, leaving the spirit stronger than before. It is asserted by SOEMMERING, that if diluted spirits be put into an ox's bladder, and be thus suspended over a sand-bath, in a few days the whole of the water escapes, and nothing but pure alcohol remains.

This seems to be an important circumstance, to be kept in mind by gentlemen having extensive anatomical museums.—*(Giorn. de Fisica.)*

14. *Strychnia in the Upas tieuté.*—Both the upas tieuté and the upas anthiar have been subjected to experiment by MM. PELLETIER and CAVENTOU, who, after various trials, obtained from the former species a crystaline substance, which is thus described:—

"An aqueous solution was prepared, which, when filtered, was treated with pure calcined magnesia; the reddish yellow precipitate obtained, when washed and dried, was boiled in alcohol two or three times, and the solutions evaporated gave an orange-coloured crystalline substance. This substance was bitter, only slightly soluble in water, very soluble in acids, and had all the properties of strychnia, except that of producing a green colour with nitric acid, instead of a red one: but this effect was occasioned by the presence of a brown-coloured substance; for, when a solution of the whole was made in weak sulphuric acid, passed through animal charcoal, precipitated by magnesia, and then dissolved in alcohol, and crystallized by slow evaporation, it lost the property of becoming green by nitric acid, and was perfectly pure.

In this state, it consisted of crystalline prismatic needles, nearly insoluble in water, very bitter, restoring the blue of reddened litmus paper, saturating acids, and with them forming solutions, in which ammonia, tincture of galls, and the alkaline gallates and oxalates, produced precipitates, soluble in alcohol; and in all things, except that of reddening by nitric acid, exactly resembling strychnia. The red colour, by nitric acid, belongs therefore to some other substance than strychnia; and, on evaporating the water with which the magnesian precipitate was washed, a yellow substance, having this property, was obtained; and which, redissolved, filtered through animal charcoal, and re-evaporated, gave a tolerably pure solution of the substance. This substance is uncrystallizable, fixed, soluble in water and alcohol, and not precipitable by acetate of lead: it exists only in small quantities in the upas.

In consequence of the purity of the strychnia obtained from the upas, specimens were examined from other sources, and it was ascertained that, though most of them reddened by nitric acid, yet they varied in the extent of this property, and one very pure specimen scarcely exhibited the effect at all. Hence, it may be concluded that the red colour is always due to a portion of impurity accompanying the strychnia, and does not belong to the alkali.

The strychnia from the upas produced all the effects on the animal economy that are produced by strychnia otherwise obtained.

The brown substance, which produces a green colour with nitric acid, was found to be same as that existing in the false angustura bark; when pure, it is without taste, but slightly soluble in water, darkened in colour by alkalies, and rendered a little more soluble. It dissolves in alcohol, and by evaporation forms micaceous crystalline plates; it is very slightly soluble in ether or volatile oils; with concentrated nitric acid, it yields a very intense green colour, disappearing by solution, re-appearing by concentration; alkalies and all oxygenating bodies make it disappear entirely. Sulphuric acid also produces a green colour with this substance; muriatic acid has no action. It has no action on the animal economy."

The account of these investigations is published in the *Annales de Chimie,* xxvi.

MISCELLANEOUS.

15. *On Pumping, as a Punishment for unmanageable Lunatics.*—In a paper by Dr. BARDSLEY, of Manchester, containing some account of the Salpetriere, the following remarks occur upon this subject:—

When every other attempt to enforce tranquillity and mild behaviour on the part of some of the more mischievous and unmanageable patients, has failed, pumping is occasionally employed as a last resource, and sometimes with the desired success. This mode of punishment is somewhat harsh; but, if applied with due care and moderation, it will be found not altogether undeserving of trial. In the following case, as in several others, its use was attended with a favourable result.

A young brunette, of robust habit of body, had been for several years subject to violent exacerbations of insanity, for a week or ten days preceding the menstrual discharge. Threats, bodily punishment, and various modes of coercion, had been employed to deter her from unremitting attempts to commit suicide: but on several occasions she had nearly succeeded in her dreadful purpose. At the desire of her friends, she was admitted into the Salpetriere. As soon as this state of fury supervened, she was ordered to be conducted to the bath, and to have cold water applied to the head in the manner above alluded to. Its effects were striking; for, though a moment before she was vehemently vociferating execrations against her friends and all present, and using violent means to extricate herself from her novel situation, when the shock came she seemed in a moment to have lost both mental and physical force. In about ten minutes the paroxysm returned, and the affusion was again repeated, with a similar result. It was found unne-

cessary, the succeeding month, to resort to this practice; for, during the height of her excitement, the mere mention of the bath was sufficient to check it, and render her tranquil and composed.—*(Edinburgh Medical and Surgical Journal.)*

16. *Preparation of Caoutchouc.*—Mr. T. Hancock has succeeded, by some process, (the results of a long investigation, but which he has not published,) in working caoutchouc with great facility and readiness. It is cast, as we understand, into large ingots or cakes, and being cut with a wet knife into leaves or sheets, about an eighth or a tenth of an inch in thickness, can then be applied to almost any purpose for which the properties of the material render it fit. The caoutchouc thus prepared is more flexible and adhesive than that which is generally found in the shops, and is worked with singular facility. Recent sections made with a sharp knife or scissors, when brought together and pressed, adhere so firmly as to resist rupture as strongly as any other part, so that, if two sheets be laid together and cut round, the mere act of cutting joins the edges, and a little pressure on them makes a perfect bag, of one piece of substance. The adhesion of the substance in those parts where it is not required, is entirely prevented by rubbing them with a little flour, or other substance in fine powder. In this way flexible tube catheters, &c. are prepared; the tubes being intended for experiments on gases, and where occasion might require they should sustain considerable internal pressure, are made double, and have a piece of twine twisted spirally round between the two. This, therefore, is imbedded in the caoutchouc, and, at the same time that it allows of any extension in length of the tube, prevents its expanding laterally. The caoutchouc is, in this state, exceedingly elastic. Bags made of it, as before described, have been expanded, by having air forced into them, until the caoutchouc was quite transparent; and, when expanded by hydrogen, they were so light as to form balloons, with considerable ascending power; but the hydrogen gradually escaped, perhaps through the pores of this thin film of caoutchouc. On expanding the bags in this way, the junctions yielded like the other parts, and ultimately almost disappeared. When cut thin, or when extended, this substance forms excellent washers, or collars for stop-cocks, very little pressure being sufficient to render them perfectly tight. Leather has also been coated on one surface with the caoutchouc; and, without being at all adhesive, or having any particular odour, is perfectly water-tight. Before caoutchouc was thus worked, it was often observed how many uses it might in such a case be applied to: now that it is so worked, it is surprising how few the cases are in which persons are induced to use it. Even for bougies and catheters it does not come into use, although one would suppose that the material was eminently fitted for the construction of these instruments.—*(Quarterly Journal.)*

17. *Cure for the contagious Glanders.*—Mr. Sewel, assistant professor of the Veterinary College, Camden Town, well known especially for his happy discovery of curing in many cases, and in all relieving, that hitherto irremediable disease, the *foundered feet* of horses, by excision

of the nerve, has been equally fortunate in another hitherto incurable disease, the *contagious glanders.* For this formidable malady, he has found a remedy in the use of sulphate of copper, given in the form of bolus or ball, daily, for several weeks. The dose was one to two ounces of sulphate of copper.

The committee of the Veterinary College, duly sensible of the value of Mr. Sewel's discoveries, have already voted him their thanks, with a handsome augmentation of his salary, and a promise of further rewards. —*(Philosophical Magazine.)*

18. *Local Causes of Carious Teeth and Odontalgia.*—It has been lately remarked, that caries and pain of the teeth prevail locally, more or less in different districts: about East Grinstead, Tunbridge Wells, Hartfield, and all that part of Sussex, it is particularly common,—scarcely any person above thirty having many sound teeth; while in other places this malady is very rare. To what is this to be ascribed? —*(Ibid.)*

MONTHLY CATALOGUE OF MEDICAL BOOKS.

*** *It having been hinted to us that gentlemen, sending copies of their Works, prefer having their titles given at length, it is our intention, infuture, to comply with this suggestion: but it is to be observed, that no books can be entered on this List except those sent to us for the purpose;—finding, in the lists hitherto transmitted, that the names of works have frequently been given as published, which have not appeared for weeks, or even months after.*

Lectures on Digestion and Diet. By CHARLES TURNER THACKRAH, Member of the Royal College of Surgeons of London; of the Societé de Medecine pratique de Paris, &c.—Pp. 156. London, 1824.

An Inquiry into the Mode in which Mercurial Ptyalism operates in the Cure of acute Disease; and whether there exist other Remedies, of similar Action, that may be advantageously substituted for it. By JAMES ARNOTT, Author of a Work on Diseases of the Urinary Organs.—Pp. 16. London, 1824.

The Anatomy of the Brain, adapted for the use of Students; comprising Directions with regard to the Method to be pursued in its Dissection, conformably to the Mode practised by most Anatomists.—Pp. 152. London, 1824.

Commentaries on Diseases of the Stomach and Bowels of Children. By ROBLEY DUNGLISON, M.D.; Lecturer on Midwifery and the Diseases of Women and Children; Member of the Royal Academy of Marseilles; of the Royal Society of Sciences, Arts, Belles Lettres, and Agriculture, of Nancy; of the Society of the Faculty of Physicians, the Pharmaceutical and Linnean Societies, of Paris; the Physico-Medical Society of Erlangen; the Academic Medical Society of Marseilles; Secretary for Foreign Correspondence to the Medical Society, and Member of the Hunterian Society, of London; Consulting Accoucheur to the Eastern Dispensary, &c. &c.—Pp. 201. London, 1824.

Hints towards the Adoption of an improved Principle of Remunerating the Surgeon-Apothecary, or General Practitioner in Medicine. Addressed to the Members of the Profession and the Public at large. By T. M. GREENHOW, Member of the Royal College of Surgeons in London; Surgeon to the Lying-in Hospital, to the Charity for poor Married Women lying-in at their own Houses, and to the Infirmary for Diseases of the Eye, Newcastle.—8vo. pp. 26. Newcastle, 1824.

METEOROLOGICAL JOURNAL,

From September 20, to October 19, 1824.

By Messrs. WILLIAM HARRIS and Co. 50, Holborn, London.

	MOON.	Rain gauge	THERM. 9 A.M.	THERM. MAX.	THERM. MIN.	BAROM. 9 A.M.	BAROM. 10 P.M.	DE LUC'S HYG. 9 A.M.	DE LUC'S HYG. 10 P.M.	WIND. 9 A.M.	WIND. 10 P.M.	ATMOSPHERIC VARIATIONS. 9 A.M.	2 P.M.	10 P.M.
Sep.														
20			55	65	53	29.75	29.80	95	90	SSW	N	Rain	Fair	Fine
21			54	62	52	29.77	29.80	95	96	NW	NW		Rain	Rain
22	●		61	65	55	30.00	30.00	80	87	NE	NE	Fine	Fine	Fine
23		.50	55	60	55	29.90	29.91	89	83	NW	NW	Rain		
24		.21	56	63	50	29.97	29.97	80	86	NE	N	Fair	Rain	
25			52	62	41	29.96	29.85	84	82	N	W	Cloud.		
26			47	51	41	29.95	29.80	80	84	NW	NW	Fine	Fine	
27		.14	46	53	37	29.60	29.50	87	80	WNW	NW	Rain		
28			43	50	37	29.73	29.85	78	79	W	W	Fine		Foggy
29	☽		48	57	49	29.84	29.77	73	79	SE	S	Foggy		Fine
30			57	66	54	29.57	29.41	92	80	S	SE	Cloud.	Fine	Rain
Oct.														
1			58	64	55	29.16	29.21	88	80	SE	SW	Rain	Rain	Fine
2		.50	58	67	51	29.30	29.42	75	80	SW	SW	Cloud.	Fine	Fine
3			57	60	50	29.70	29.77	80	82	SW	S	Fine	Cloud.	
4			56	62	46	29.74	29.74	88	84	E	ESE	Fine		
5			55	60	57	29.57	29.48	90	96	SE	E	Rain	Sho'ry	Sleet
6			58	62	58	29.36	29.27	97	96	SE	E	Cloud.	Rain	Cloud.
7		.40	60	62	57	29.20	29.23	96	88	SW	SSW	Cloud.	Sho'ry	
8	○		58	63	54	29.27	29.32	86	76	SW	WSW	Fine	Fine	
9			57	62	56	29.46	29.54	82	70	W	W	Fine		
10			58	50	51	29.50	29.13	80	96	E	S	Cloud.	Rain	
11		.68	54	57	47	28.95	28.90	92	75	SE	SW	Rain		
12			51	54	37	28.82	28.97	90	87	NE	N var.	Cloud.		
13			43	46	35	29.30	29.42	75	66	NW	WSW	Fine		
14			38	44	33	29.48	29 55	70	72	WSW	W	Foggy	Fine	Sl.Fog
15	☾		42	47	32	29.57	29 62	77	82	W	N	Foggy		Cloud.
16			37	45	35	29.78	29.87	78	64	WNW	NW	Fine		
17			35	39	32	29.93	30.03	80	78	W	SSE	Fine		Cloud.
18		.30	37	50	41	30.03	30.03	78	78	WSW	WSW	Fine		
19			49	55	51	30.03	29.95	82	75	WSW	WSW	Fine		

The quantity of rain fallen in the month of September, was 3 inches and 77.100ths.

NOTICE TO CORRESPONDENTS.

Mr. W. may rest assured, that he is not the practitioner in Bath, *to whom we alluded in the Review of* Mr. CALVERT'S *Work.*

We regret that Sir L. MACLEAN'S *Paper did not arrive in time for the present Number; it shall be given in the next.*

THE LONDON

Medical and Physical Journal.

Nº 6 OF VOL. LII.] DECEMBER, 1824. [Nº 310.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,

SELECT OBSERVATIONS, &c.

ART. I.—*Observations on Dropsy; particularly on Ascites combined with Pregnancy.* By Sir L. MACLEAN, Knt. M.D. (EDINB.); Member of the London Medical Society, and of the Royal Physical Society of Edinburgh.

IN the periscope department of Dr. JOHNSON's excellent Review for September, six cases of ascites during pregnancy, and the treatment adopted, are mentioned. Ascites being at all times an ungovernable disease, and difficult of cure, it is obvious that it must be still more so in such circumstances. The subject, then, is, in every point of view, of paramount importance; since the life of the mother or fœtus in utero, or both, will, in a great measure, depend on the conduct of the practitioner in such cases, as is strikingly exemplified in those alluded to. Of this both the reviewer and reviewed are fully aware, from the solicitude evinced "to have as much information as possible on this obscure point of obstetric surgery."*

I, therefore, readily obey the call on the medical public to contribute such information and facts as may have occurred to their observation, by directing the attention, through the medium of the London Medical and Physical Journal, to a case which fell under my care many years since (1791), referred to by the Editors of this Journal, in their Number for October, and published in the Appendix to my work on Hydrothorax and General Dropsy.†

Though this case excited a considerable degree of interest at the time, yet I am willing to think that, from those reviewed by Dr. Johnson, it may be deemed worthy of greater publicity and attention than it has hitherto had; since it seems to me, and is

* *Medico-Chirurgical Review.*

† We find that a few copies of this work, which was favourably noticed in this Journal at the time of its publication, are still to be had of the publisher, Mr. Nunn, Great Queen-street.—EDITORS.

thought by several medical friends who have perused both, to furnish a complete answer to the information required.

It will appear that, in the subject of this case, Mrs. Constable, ætat. 34, the operation of paracentesis was performed successfully twice prior to, five times during pregnancy, and as many after delivery; that 359 pints of fluid were evacuated; that she went the full time of utero-gestation, without any untoward symptom during or subsequent to these operations, or in her lying-in; that she was delivered of a full-grown male child, which child attained the age of manhood, and is now living and well.

This is the only instance I have met with on record, of the mother and infant surviving the delivery. The former died some months afterwards, from the rupture of an abscess of the right ovarium, which was found, on dissection, to have contained about five pints of pus; and which, it will be admitted, no medical treatment could have averted after I was consulted. But, in my remarks, it is stated, "had this case occurred to me at an earlier period, before impregnation had taken place, and before the stomach had, by sympathy with the uterus, acquired such exquisite susceptibility to medicine, it is probable, from the fortunate results of two cases* which fell under my care the following year, the event might have been favourable." Subsequent experience has fully confirmed this opinion.

At that time the writer of this case was a young physician, without any medical authorities as guides to direct his steps; nor had he ever practised the obstetric art, except in a few instances in the East Indies, from which he could not shrink without giving offence, or leaving the females to nature: yet he determined promptly on the course to be pursued, and acted upon it fearlessly and with confidence of success, having omitted no precaution that was likely to ensure such a result. And here he may be permitted to offer the justly-merited tribute of applause to the respectable surgeon, Mr. Gretton, of Colchester, in attendance with him, who, with a liberality characteristic of real merit, submitted to every hint and suggestion offered, though coming from a junior practitioner.

The plan of treatment adopted in the cases alluded to in the Medico-Chirurgical Review, is so different from that which I would have recommended, and from that practised in Mrs. Constable's case, that I feel a delicacy and difficulty in offering any comments upon it; yet, as the public have an imperative claim upon every medical man's experience, when it is likely to prove beneficial to his fellow-creatures, a few general remarks will not, I trust, be deemed irrelevant or obtrusive.

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* Cases V. and VI., *Appendix to Inquiry into the Nature, Causes, and Cure of Hydrothorax.*

In expressing my surprise at the advice given by the two highly respectable physicians consulted on Mrs. Langstaff's case, my motive, it is hoped, will not be mistaken. In the first part of the treatment, instead of "general blood-letting, blistering, calomel, digitalis, and squills," resorted to with the view "of relieving the abdominal pain and distention, which were so distressing and urgent as to threaten the life of the patient,"* the immediate evacuation of the water, as the cause, was surely the obvious and only remedy; and to allay uterine action as much as possible, instead of exciting it, "by letting off the liquor amnii."†

But here nature, ever true to her purpose, would not act in obedience to the dictates of art, in contradiction to her own salutary laws: nor, indeed, is it probable that she could, under such inordinate accumulation and distention, until the evacuation of the water brought the parietes of the abdomen in contact with the uterus, and the abdominal muscles thus contributed their powerful aid toward the expulsion of the fœtus. "It will be observed," says the Reviewer, "that, in this and three following cases related, parturition very quickly followed the operation." The cause seems obvious. There can be little doubt that sudden pressure applied to, or removed from, the uterus, would alike derange its functions; and that, if there was a disposition in this organ to contract, from the previous death of the fœtus, the evacuation of the water, for the reasons mentioned, might accelerate abortion. The result in Mrs. Langstaff's case, was such as might be expected: violent symptomatic fever, consequent upon uterine and peritoneal inflammation, demanding the most active remedies to subdue them. The subsequent treatment seems to have been appropriate and judicious.

That these remarks are not the offspring of theory, but the result of what was actually practised with the best effects, a reference to Mrs. Constable's case will show. Before the fourth tapping, a train of alarming symptoms came on from similar causes: excessive distention and pressure, owing to the operation being delayed too long, which immediately ceased on the evacuation of the water. The lady lived ten miles from me, and six from the surgeon, which explains the cause of delay as not attributable to either. The quantity of the water here was greater than at any of the former tappings, being thirty-eight pints.

Such distressing occurrences are not uncommon in ordinary cases of ascites, and though not so serious in their consequences, ought always to be guarded against, when in our power. One instance only shall be mentioned from my Report-book. On

* *Medico-Chirurgical Review.* † *Ib.*

Friday, the 20th December, 1811, I was desired to visit Mrs. Sherriff, a married lady, ætatis fifty-two, residing twelve miles from Sudbury. She had been under medical discipline for several weeks, without receiving any benefit, but had suffered much, for the last few days, from the enormous size and distention of the abdomen. The operation was urgently called for; but not meeting the family practitioner, who, it appeared, had decidedly declared that there was no water in the abdominal cavity, I was compelled, though reluctantly, to postpone my next visit till Monday, the 23d. But early the following morning, my immediate attendance was desired. I found the lady had been suffering under severe abdominal pains and incessant retchings, the greater part of the night. The operation was immediately determined upon, but performed in the most bungling manner, with a tremulous hand; owing, probably, to a secret impression that no water would follow. Water, however, did flow in abundance, though in a slow, irregular, dribbling manner, owing to the cannula not entering the cavity; the stilette having been withdrawn when only the point had penetrated. The operation was irksome and tedious, but the patient was speedily relieved. From this period my respected friend, Mr. Anderson, of this town, attended with me. She was once tapped afterwards by him; and I had the satisfaction of leaving her, on the 10th of February following, perfectly recovered: nor has she had any return since.

On the next (Scarpa's) case, it is only necessary to observe, that a similar oversight was committed, in delaying the operation till the patient "was driven to the point of death;" and that, had this venerable and intelligent surgeon been called in earlier, it is more than probable it would not have been postponed to so late a period. It is necessary, in ordinary circumstances, to draw off the water with great caution, and thus the lives of the twins, as well as that of the mother, might probably have been saved.

In many females, there is a strong predisposition to peritoneal, uterine, and intestinal irritation or inflammation, (especially when the body has been unusually large,) from the sudden collapse succeeding inordinate distention and pressure. How much more, then, are such evils to be apprehended, when ascites has been conjoined with pregnancy. Fully aware of this, every precaution likely to obviate them were observed in Mrs. C.'s case. A regular, uniform, but moderate, pressure was kept up over the whole abdomen, by means of a flannel waistcoat previously fitted to the body, and furnished with straps, to be gradually tightened as the water flowed; and when she was faint, or the motion of the fœtus violent and indicative of uneasiness, a plug was introduced into the cannula till these symptoms

subsided. A full dose of laudanum, too, was sometimes previously administered. To these and the other precautions used, the success is to be attributed.

To the third (or Dr. CRUCH's first) case, the same remarks apply, as is very justly observed by the Reviewer. "Drastic purges," it is stated, "and venesection were tried, without affording any relief." Did they do no harm? As I hold the former to be inadmissible in ordinary cases, so in these they must be still more so, by exciting uterine irritation, from sympathy with the intestinal canal; and that the latter was unnecessary, if not injurious, may be inferred from "there being no appearance of phlogosis in the peritoneum, or other part of the abdomen, on dissection." Perhaps it may be said that venesection prevented this. "But the operation gave immediate relief:" this speaks for itself.

In the remaining three cases, the serious consequences of delay, and most probably of the neglect of proper precautions during the operation, are obvious.

In the last case but one, which was combined with universal anasarca to an alarming degree, it is highly probable that acupuncture, in preference to scarifications, would have proved a valuable and powerful auxiliary. I am induced with the more confidence to recommend it, from the great relief and benefit derived from it in a case which has recently occurred to me.

Samuel Cooper, a butcher, ætatis thirty-nine, after suffering for some time under hepatic and visceral disease, from a long course of intemperance, became dropsical in May last. He had ascites and anasarcous swellings of the lower extremities, up to the hips. After taking a few medicines from Mr. Lewis, a highly respectable practitioner of this town, he was advised to go to London, and was admitted into St. Bartholomew's Hospital about the 12th or middle of June. He remained there till the 15th July, when his friends wished him to return into the country; his disorder having progressively advanced, and his general health having suffered from confinement. Tapping was proposed the following week, had he remained. Besides other remedies, drastic purgatives, by his account, were occasionally prescribed. He came to me on the 17th July. The whole abdomen, the lower extremities, the hips, even the lumbar region, were enormously distended with water. The countenance was cadaverous; the conjunctiva of a deep yellow hue; the breathing extremely difficult, threatening suffocation on motion. Some parts of the abdomen were of a livid colour, and the veins distended with dark blood. I advised immediate tapping, with the precautions already mentioned, though I dreaded the result; and prescribed strong bitters of the infus. gent. c. and calumba, in combination with saline diuretics

ter die; the compound squill pill and calomel every night. He was tapped on the 21st, and four gallons of fluid drawn off; but, though this was done very slowly and with great judgment, he had nearly sunk under the operation. The anasarcous swellings quickly disappeared; but the body swelled in proportion, so as in a few days to have attained nearly its original size, and so as to require tapping again on the 28th; when the same quantity of fluid was evacuated. He, however, bore the second operation much better than the first.

The body has not swelled since; but, as he began to walk about, the legs became again anasarcous; with the view of relieving which, acupuncture was advised. This he amused himself by performing on different parts of the feet, legs, and thighs, by which a regular and copious discharge was kept up for some weeks; and, as the punctures healed, which was generally in two or three days, fresh ones were made.

On the 18th September, I saw him for the first time since the 17th July, having been from home when he called at different times. No water in the abdomen, and but little œdema of the feet and ankles towards evening. He had desisted from the acupuncture for ten days; had gained flesh and strength; no yellowness of the conjunctiva; urine in full quantity, bowels lax; mouth soon became affected, and he has been kept under the influence of the mercury since. The medicines were varied as circumstances indicated; and, together with the tonic and diuretic mixture, he has been of late taking a strong infusion of the broom *(genista)*, with the supertartrated potass, the squill, and blue-pill, h. s.

September 25.—Continues to improve, and considers himself recovered. Urine clear, and voiding from four and a half to five pints daily.

Should the above abstract meet the eye of Dr. Hue, under whose care the patient was, he will recollect the case, and be surprised, but gratified, at the result.

In the course of a tolerably extensive practice of thirty-four years in this country, many cases of ascites, both simple and combined with general dropsy, as well as during pregnancy, have fallen under my care, and I have had every reason to be satisfied with the treatment adopted. My first object has been, and I think ought always to be, to ascertain what organic derangement, if any, existed as a cause? whether hepatic, splenetic, ovarian, or mesenteric? or whether the water was contained in a sac, or in the abdominal cavity, or both, which sometimes happens? Having formed as accurate a judgment of the whole case as circumstances permitted, the indications of cure were regulated accordingly. A course of saline, mild, aperient diuretics, in combination with the bitter infusions and tinctures,

squills and mercury at bed-time, steadily persevered in for a length of time, till the object in view be accomplished, or till every prospect of removing the water by the natural outlets be cut off, will be found the safest and most effectual practice. Mercury in the mildest form, and in moderate doses, should be carried to the extent of affecting the salivary glands, and the habit kept as long as may be thought necessary under its influence. Without these precautions in the cases for which it is peculiarly adapted, there will be no security from returns; and it may be worthy of remark here, that they are the opposite to those in which digitalis exerts its salutary influence, as has been long since observed elsewhere. "If the disease occur in delicate subjects of either sex, endowed with a high degree of susceptibility, with a pallid countenance, a soft, smooth, thin skin; a white or transparent appearance of the anasarcous swellings, readily pitting on pressure, and retaining the impression of the finger; more especially in females, from frequent parturition, profuse uterine or other hemorrhages, or similar debilitating causes, without any organic affection,—the digitalis alone will generally succeed in evacuating the water: but its salutary effects will be greatly promoted by mild tonics, steel in particular, and moderate doses of the fixed vegetable alkaline salts. Calomel, squills, and the crystals of tartar, if at all admissible, must be administered with extreme caution, and in very small doses."* Digitalis ought never to be trusted to alone in any case, and in simple ascites I have found it of no use, though repeatedly tried; but when combined with anasarcous swellings, of the character above described, it will prove a good auxiliary. When there is no pregnancy, frictions to the whole abdomen, with the liniment. hydr. or the ung. hydr. saturated with camphor, and as tight a bandage as can be borne, removed at bed-time, will contribute materially to the cure.

The practitioner must be satisfied with a slow and gradual improvement; for, if his impatience prompt him to the use of drastic purgatives, or other violent remedies, as is too often the case, with the view of accomplishing a cure speedily, he will be greatly disappointed. His object should be to evacuate the water *per vias urinas*, as recommended by Baglivi, Riverius, and other respectable writers, and amply confirmed by my own experience: for though such harsh means, as advised by some, may occasionally afford temporary relief, and carry off much watery fluid by the bowels, yet, by exhausting the vital powers, they for the most part confirm the disease, and the water will accumulate more rapidly afterwards. By pursuing a different

* *Inquiry into the Nature, Causes, and Cure of Hydrothorax and general Dropsy*, p 163 et seq.

course, the general health and strength will be improved; and, should the operation eventually be necessary, the habit will be in a more favourable state for it, the kidneys more readily acted upon, and the chance of recovery proportionably increased.

As far as regards bleeding, though it cannot be denied that instances of dropsy will sometimes occur in which free and copious depletion may be indicated, and even indispensable, before we can hope to make any impression upon the absorbents or kidneys, yet my experience fully warrants the assertion, that they are comparatively rare, and that it is not to be numbered among the general remedies in this disease. When the pulse is tense and cordy, the anasarcous swellings at the same time are hard and resisting, the complexion florid, with symptoms of general plethora, the bodily strength not much impaired, the disease has been of short duration, and the subject is in the prime of life, the tone of the arterial system must be relaxed and subdued by venesection, before digitalis or other diuretics can be expected to produce their salutary effects.* The excellent case of Professor GRAHAM, of Edinburgh,† affords a striking illustration of this; and, had I seen many of my patients at an earlier period, a similar plan would most probably have been adopted, since in some of them the serous effusion was doubtless the consequence of the neglect of venesection in the early stages; but in others to the too free and injudicious use of the lancet, especially in the advanced stages of inflammatory affections. But dropsy in general, as it has fallen under my care, I have found to be a disease of exhaustion and debility, occasionally, however, accompanied with local congestions of blood; especially in hydrothorax, owing to the interruption to pulmonary circulation from pressure, which speedily gave way on the absorbents and secreting organs being freely acted upon, or on the cause being removed, without the necessity of blood-letting. In hospital practice, the case may be different, where the patients are admitted immediately on, or soon after, the attack; but in the country, where they have probably been for weeks under other discipline before the physician is consulted, it is far otherwise.

While on this part of the subject, I cannot help adverting to the practice of our continental medical brethren. We owe so much to them for their researches and discoveries in physiology, pathology, and chemistry, that we ought to speak with reserve of their treatment of diseases; but, in some of the most acute and inflammatory affections, their practice seems to me to be

* The kidneys and bowels will sometimes act spontaneously in such circumstances, though previously the most powerful diuretics and purgatives made no impression upon either. *Vide infra*, p. 26.

† *Edinburgh Med. and Surg. Journal*, No. 71, p. 226.

worse than inert and useless; for many of them trust to the abstraction of a few ounces of blood by cupping or leeching, or mild aperient ptisans; while in other instances they go into the opposite extreme, as the cases under review demonstrate: and though their public hospitals, and other similar institutions, furnish opportunities of post-mortem examinations, which we in this country do not possess, yet they seem not to profit by them, but proceed in the same inefficient course; of which our medical Journals furnish many examples from their writings.

Where blood-letting is imperatively called for, it should be prompt, free, and quickly repeated, until the inflammatory action be subdued. I have for many years inculcated the maxim, "not to look at the quantity of blood drawn, but at the effect," and have not been satisfied to carry it *ad deliquium;* but, after directing the arm to be untied, have waited till the patient recovered, and if the disease was not subdued, or the strength of the pulse not materially and permanently reduced, have again and again had the ligature re-applied, and proceeded till the end in view was obtained: and I have the satisfaction in reflecting that many lives were thus saved, which would otherwise have been sacrificed.

The cases most embarrassing to young, and even to experienced practitioners, are those which are so masked by distant sympathies of vital organs, that the pulse is often extremely quick, feeble and small, fluttering, irregular, or intermitting, yet where the inflammation is making serious and rapid progress in some organ, not yet suspected, because no pain is, perhaps, complained of there. In such doubtful instances, where venesection was not previously thought of, or was condemned as improper, my maxim has been—"let us look at the blood," and desist after the loss of a few ounces, if found ineligible, or proceed, if otherwise; and be guided in the quantity by the effect, and in some degree by its appearance. How often have I had the gratification of observing the pulse become slower, full, and regular, respiration free and easy, the cough less urgent, the expectoration loose and copious, in such circumstances, after the heart and vascular system were relieved of the accumulated load. Such cases are very common, but often overlooked or mistaken, until it be too late.

While on this subject, one case shall be mentioned, where a plan nearly similar to that adopted by Dr. Maxwell, of Dumfries, recorded in the Edinburgh Medical Journal, was followed, and with equal success. The disease was insidious and masked at first, yet I had no hesitation in pronouncing it that species of acute phrenitic inflammation preceding watery effusion in the head, improperly termed hydrocephalus acutus; and this opinion was confirmed by the information received, that a brother

of the patient had died of this disease. Mr. Corder, near Coggleshall, Essex, was the subject of this case: he was of a nervous, timid disposition. The pulse varied during the examination from 76 to 120 in a minute, was small, but cordy. Finding that he fainted when only a few ounces of blood were drawn before my visit, I directed him to be bled in a recumbent posture, and, when syncope came on, the ligature to be untied until he recovered, when it was again applied. This was done repeatedly during, and in the intervals between, my visits; for he resided sixteen miles from me. Leeches, blisters, and other active means, were at the same time resorted to; but I am convinced that without venesection, quickly repeated in the manner stated, they would have proved of no avail; and that it is the only remedy to be trusted to in limine, with any prospect of success. An interesting feature in this case was, that the bowels acted spontaneously during the almost total suspension of the circulation, while before, the most drastic purgatives had little effect; and though mercury was used constantly, both externally and internally, it had no effect on the salivary glands, until venesection was carried to the utmost extent, and was no longer necessary or admissible. I was called to this patient on the 13th, and took my leave on the 26th September, 1819. He has enjoyed good health since.

Having insensibly extended this communication far beyond the limits intended, it is full time to bring it to a close. I would only further beg leave to add a few words on the pathology of dropsy. From the foregoing observations, it is not likely that I should subscribe to the modern pathology of this disease, though it has so able an advocate as the late excellent Dr. Parry among its supporters. This doctrine has always appeared to me to be founded on a partial, and consequently erroneous, view of the real state of things. Experience does not sanction the opinion of the universality of the buffy coat of the blood of dropsical subjects; and, even if it did always or generally exist, it has been clearly ascertained that it is not an unequivocal test of inflammation. That dropsy is sometimes preceded by, or accompanied with, inflammation, or increased action of the heart and corresponding momentum of the blood, no one will deny, as has already been adverted to; but, that by far the greater number of dropsical effusions—I would say nine in ten, are the result of exhausting and debilitating causes, without any traces of previous inflammatory action, any one who has carefully and impartially investigated the subject will, I think, admit. Dr. Parry seems to allow that this is sometimes the case, but infers, though he has not proved, the existence of previous inflammatory excitement. The doctrine is the more dangerous, as being advocated by so able a pathologist and

physician, because it leads to a most dangerous practice, if generally acted upon. Still less can I assent to the opinion advanced by him, that the absorbents are not affected or concerned in dropsy, though his able reviewer is a convert to it.* To admit this, would be to abandon one of the first indications in the cure.†

As to the coagulability or non-coagulability of dropsical urine by heat, I have never tried, nor am I ever likely to try it, because I always regarded it as a vague and inconclusive test; and I believe it has been amply proved to be so by others. Even if it were to be depended upon, it could not be adopted in general,—certainly not in country practice.

Sudbury; September 26th, 1824.

ART. II.—*Observations upon those Appearances which have been supposed to arise from the Action of the Gastric Juice upon the Stomach post Mortem. With Cases in illustration, taken from the "Allgemeine Medezinische Annalen," viertes heft.* By JOHN NORTH, Surgeon.

SOME interesting discussions have lately taken place, in the most respectable medical Societies of the metropolis, upon the occasional detection of a partial or total destruction of the stomach, and contiguous parts, in young children. I am not aware that any cases have been published in this country, in which a satisfactory detail of the symptoms, which were in such instances exhibited during life, has been given.‡ I have therefore translated the three following cases from a German Journal: to me they appear to possess much interest. If it should be objected that the symptoms are detailed with unnecessary prolixity, let it be remembered that what is termed German minuteness bears also the stamp of German accuracy and industry.

CASE I.—A feeble boy, eighteen weeks old, who had been lately weaned, was attacked with the thrush. The infant was thirsty, emitted an unpleasant sour smell from the mouth, vomited frequently, and had seven or eight stools a-day. The matter that was passed by vomiting and by stool, was of a thin slimy nature. The little patient screamed frequently, and towards evening the skin became hot. The disease was considered to be an inflammatory irritation in the mucous surface of the stomach and bowels, produced by indigestible food. The health

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* *Medico-Chirurgical Review,* No. ix. p. 13.

† *Inquiry into the Nature, Causes, and Cure of Hydrothorax,* passim.

‡ At the time of my writing this paper, I did not know that a very luminous account, containing an abstract of many cases of a similar kind, had been published by Dr. GAIRDNER, in the Transactions of the Medico-Chirurgical Society of Edinburgh, 1824. Dr. Gairdner supports the Hunterian doctrine, of the destruction of the stomach being caused by the action of the gastric juice. His paper is highly interesting, and deserves an attentive perusal.

of the child was soon apparently restored, by giving half a grain of calomel every three hours, with a little sulphate of magnesia. Borax was applied to the thrushy parts; and the diet consisted of weak broths and milk, with fennel tea. After a few weeks of good health, the child was found, on awaking from a tranquil sleep, to be affected with a rattling in the throat: the limbs were convulsed; the face was suddenly flushed; and, before any physician could be procured, he had expired.

Upon opening the body, the following appearances were observed:—Upon sawing through the bones of the cranium, a considerable quantity of clear water poured forth. The brain was soft and pulpy; its vessels rather turgid *(blutreich)*; the ventricles also contained more than the natural quantity of water. The stomach, in several places, presented a reddish brown and pulpy appearance: there were no apertures in any of the softened parts, but the slightest handling of them made holes, through which was discharged a sour-smelling fluid, which had been abundantly contained in the stomach.

Case II.—A boy of a year old, weaned but a short time, had only lately recovered from cough, which was consequent to measles. For six weeks he had been affected with diarrhœa, passing six or eight stools a-day: the evacuations consisted of a thin, yellowish green, and lumpy matter. The infant was hot, thirsty, and slept unsoundly; the legs were frequently drawn towards the belly, with screaming. These symptoms increased in severity; the diarrhœa became more frequent; the child was pale, emaciated, drank greedily, screamed frequently, and the skin was parched. Violent vomiting soon occurred. Professional assistance was now first sought. The little creature had a blanched appearance; the eyes were sunken and dull; it groaned and whimpered lowly, lay almost motionless upon the back, breathed deeply and slowly, but occasionally roused from this state of apathy with a scream; threw itself about in a restless manner; drew up the feet towards the belly, struck the abdomen frequently with the hands, which were then with violence directed to the nose and mouth; and, after this state of excitement, the previous appearance of tranquillity was resumed. The vomiting still continued frequent; the head, belly, and palms of the hands, were hot to the touch; no perspiration was observed; the tongue was white and moist; a sour smell proceeded from the mouth; the thirst appeared almost insatiable. As often as the child drank a little milk, it threw up a sour smelling, thin, slimy fluid, with lumps of the milk coagulated. Pressure upon the belly appeared to give no pain, but it caused slight vomiting. In the evacuations from the bowels, which were frequent, a thin watery fluid, mingled with small, yellow lumps of fæces, was discharged. Urine was seldom passed. The pulse was small and irregular, and beat 120 in a minute. The child died in the night, after such means had been recommended as appeared appropriate to the above state.

Upon examining the body, the venous system of the brain was found loaded with blood. The lungs here and there strongly adhered to the pleura, probably from the effect of measles. The stomach and all the small intestines were in the highest degree of a pulpy softness: the cardiac extremity of the stomach was perforated, and through this preternatural

opening a very considerable quantity of a sour, yellow, thin fluid, mingled with lumps of coagulated milk, had escaped into the cavity of the abdomen. Much more of the same fluid was contained also in the stomach and small intestines. So thin were the small intestines, that the slightest touch made a hole in them: they presented, as did also the stomach in different places, an appearance of a darkish colour. Well-defined traces of inflammation were not perceived.

Case III.—A boy, three years and a quarter old, who had been weaned at too early an age, and over-fed with indigestible food, became restless, and frequently vomited a thin, slimy, and very sour-smelling fluid; and also passed each day as many as from eight to ten thin, slimy stools, of a very offensive smell. Whatever was taken into the stomach was succeeded by vomiting. Great thirst was present; the tongue was white; the breath had an acid smell; the belly was considerably swoln, and appeared painful in the epigastric region. There was an occasional discharge of very fetid flatus. The child cried frequently, and often carried the hands towards the mouth. There was slight fever, with occasional sweats. The means employed—sal-ammoniac *(salmiak)*, gum arabic, a little extract of poppies, starch glysters, and warm fomentations, were not productive of any benefit. The vomiting, diarrhœa, the tenderness of the belly, the restlessness, the constant crying and moaning, increased; and, on the sixth day of the disease, the fatal event occurred.

Upon opening the head, the bones of the cranium were perceived of a bluish-red colour, from the turgescence of the veins. The vessels of the dura mater were over-loaded with blood, and the whole texture of the brain was highly vascular. The lateral ventricles contained air, which had somewhat raised up their covering; they contained also a small quantity of reddish serum; and still more of this fluid was found in the basis of the skull, and in the vertebral canal. The cardiac extremity of the stomach had a brownish-yellow and gelatinous appearance, and presented here and there a black colour: in it there was a considerable aperture, through which a yellowish and remarkably sour-smelling fluid had passed into the cavity of the abdomen. Some of the same fluid also remained in the stomach; the whole texture of which was so extremely tender, that it ruptured upon the slightest touch.

To the German and French physicians, cases similar to the above present, I believe, but little novelty. In children particularly, destruction of the stomach and bowels has frequently been detected by them. It is probable that the frequent occurrence of the appearances above described may have escaped the observation of English practitioners, from their want of equal anatomical zeal. The symptoms by which these cases were characterised, would not excite a suspicion of any other affection than a mere derangement of stomach and bowels, and an inspection of the body would not be considered necessary. I have myself seen one example of a similar kind, which I published some years ago.* The stomach is in the museum of Mr.

* *Medical Repository*, August 1815.

Brookes. The symptoms under which the child laboured, were nearly similar to those above described. It cannot be doubted that these appearances in the stomach and intestines precisely resemble those which were supposed by Mr. Hunter to arise from digestion of the stomach after death. Mr. Hunter describes the appearances he observed, in these words:—"The edges of the opening appear to be half dissolved, very much like that kind of dissolution which fleshy parts undergo when half digested in a living stomach, or when dissolved by a caustic alkali,—viz. pulpy, tender, and ragged." The explanation of Mr. Hunter has to me always appeared very unsatisfactory; the cases above related confirm me in the doubts I previously entertained. In the paper to which I have alluded, I have stated some reasons, which seem to me to render Mr. Hunter's supposition extremely improbable. Mr. Hunter* believed that what he termed digestion of the stomach can never take place, except in cases of sudden death, when the stomach is in full health, and the gastric secretion is surrounded by a dead organ. Dr. Mason Good,† after having stated the opinion of Mr. Hunter, observes, "It is true the stomach has been found thus eroded in one or two cases, where death has followed after long general illness; but, in such instances, it is probable that the stomach itself had been free from the general disease, or was not essentially affected by it."

The symptoms of the case which fell under my observation, and those which have been detailed by the German physician, indicate very clearly the existence of gastric disease. It is, I know, an admitted fact, that the dissolvent power of the gastric juice is in an inverse ratio to the muscular force of the parietes of the stomach. Those animals in which the parietes of that viscus are very thin, and almost entirely membranous, are those in which the gastric juice has the most force and activity. Whatever may be the power of the gastric juice, however, the *vitality* of the stomach enables it to resist its destructive action. It is the vitality of the tender and delicate worms termed *lumbrici*, which enables them to resist, for so long a time, during their residence in the stomach, the dissolvent power of the gastric fluid.

M. Andral has published many highly interesting observations upon the pathological anatomy of the digestive canal, and has thrown out many remarks which bear directly upon this subject. The original paper I have not had an opportunity of consulting. A translation of it is contained in the Medico-Chirurgical Journal, December, 1823.‡ Ulcerations follow the pimples and

* *Philosophical Transactions*, 1772, vol. 62, p. 447.

† *Study of Medicine*, vol. 1, p. 16.

‡ And in this Journal, July of the same year.—EDITORS.

pustules, with which the mucous membrane of the stomach and intestines is sometimes covered. It is suggested as a question by M. Andral, whether "the greatest analogy does not exist between the mode of the production of these ulcerations, and the development of certain ulcers of the mouth, which likewise owe their origin to small pustules known under the name of apthæ?" It frequently happens that the mucous membrane may for some time be the seat of inflammation, and that no solution of its continuity is detected. The occasional rapidity of its ulceration is probably connected with some idiosynerasy, which is yet to be detected by pathological researches, and a careful consideration and comparison of the appearances discovered, with the symptoms exhibited during life, and the particular temperament and disposition of the patient. If living animals,* of the same age and strength, are poisoned by corrosive sublimate, we shall, at the end of forty-eight hours, discover only symptoms of inflammation of the mucous membrane in some, whilst in others ulceration will have taken place.

M. Chaussier† has sometimes detected ulceration of the mucous membrane of the stomach in lying-in women. The works of Bichat and Broussais contain much valuable and instructive matter upon the subject, and describe very accurately the appearances that are produced by disease of the stomach and contiguous parts, from the first blush of inflammatory action to positive destruction of texture.

In many points of view, the subject is worthy of investigation; and I have no doubt that, if it were customary to inspect the bodies of young children who perish with symptoms of gastric derangement, that we should detect the progress to positive destruction of texture in its different stages; and, by a due attention to the symptoms of each case, we might derive the gratifying power of employing our means of relief, before the disease with which we had to contend was beyond the reach of art. For another reason, also, the subject demands attention. The destruction of the stomach and contiguous parts, which is found in these cases, and which I have no doubt is the result of inflammation, perhaps neglected or overlooked in its first stages, is so very similar to the appearances that would be produced by acrid poisons, that, under particular circumstances, which may easily be conceived possible, unfounded suspicions might be entertained as to the real cause of the death of the child, by those who are ignorant of the fact of their occasional occurrence from disease.‡

Seymour-place, Bryanstone-square.

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* M. Andral, *loco citato.*

† *Dict. des Sc. Med.* tome 32, p. 368, and tome 50, art. *Perforation.*

‡ We likewise beg leave to refer our readers to the work of M. Cruveilhier, reviewed by us in vol. xlviii. of this Journal.—Editors.

ART. III.—*Case of Chronic Hydrocephalus, in which Recourse was had to Tapping, for the purpose of evacuating the Fluid.* By WILLIAM MONEY, Esq. Surgeon to the Royal Metropolitan Infirmary for Children, to the Asylum for the Recovery of Health, &c.

THE accompanying case, although it does not present any features of absolute novelty, nevertheless may prove interesting to your readers, as one of the few recorded in which the brain has been tapped. You will perceive that, in this instance, the head was punctured eleven times within ten weeks, and nearly forty ounces of fluid evacuated. Without speculating on the chances of this method being ever so far improved as to admit of general adoption in these unfortunate cases, I may be permitted to remark, that I regard it as a duty to place the one which has occurred to me on record; as it is only by the accumulation of facts that we are ever likely to come to any satisfactory conclusions.

October 15, 1822.—James Richard Hunt, born on the 25th December, 1821. At birth, his head was considered to be larger than natural, but in other respects he was well-formed and healthy. The head gradually augmented in size, his health became deranged, and recourse was had to medical advice; but his calamities continued to increase. In August last, he was admitted, under Dr. Webster's care, at the Metropolitan Infirmary for Children; and, by treatment pursued by him, the health was perfectly restored, but the head continued to get larger, so much so, that, within the last three weeks, the circumference of it had augmented one inch. My colleague, Dr. Webster, now considered the case as hopeless, and, in a consultation with myself, we decided on taking the opinions of the other medical officers of the establishment. This was done on the 13th of October; when it was agreed that medical treatment offered no hope of relief, and accordingly it was determined to attempt a cure by reducing the bulk of the head, through the means of tapping.

The following statement is the exact size of the head, as measured on the day previous to the operation; and also a detail of other circumstances connected with the case:—The weight of the body, fourteen pounds ten ounces, including his apparel. The weight of his head, from six pounds and a half, to six pounds and ten ounces. The greatest circumference of the head, twenty-three inches. From the anterior point of the tip of one ear, carrying the thread around the occiput to the anterior point of the other ear, fourteen inches. From the anterior point of one ear, carrying the string around the forehead

to the same point of the other ear, is nine inches and a half. From the posterior edge of one ear, carrying the string over the parietal bones to the same point of the other ear, is fourteen inches and a half. From the base of the nose along the vertex to the atlas, is sixteen inches. The division in the os frontis, is from two inches and a half to three inches. The division from the parietal on each side to the frontal, varies from two to three inches. The division from one parietal to the other, varies from one inch and three-quarters to two inches and a quarter. The posterior fontanel, and the division between the parietal bones and the occiput, measures much less. The forehead projects very considerably over the face; and, in consequence of the pressure upon the upper part of the orbits, the eyes are so much thrust downwards as scarcely to be seen; they have the appearance of those of a person in *articulo mortis*,—flat, semi-closed, and limpid. The face is small, and of a triangular figure. The cranium, except where above described, is as perfect and ossified as in other children of the same age. The spine is perfectly natural. The temperature of the body corresponds with that of other children; and the circulation is well carried on at the extremities. He craves for food, and is seldom satisfied. The bowels are torpid, and the urine is scanty. His respiration is regular, but inclined to be laborious. He does not rise his head, which is very hot to the touch; and his voice is faint. Fluctuation is very evident in the divisions, and, upon varying the posture of the head, the movement of fluid within the cranium is very perceptible.

At three o'clock this day, in the presence of my colleagues and several pupils, I introduced a very small, fine, flat trocar, about the size of a couching needle, in a valvular direction, into the right lateral part of the fontanel, near the sagittal suture. The instrument was introduced about an inch and a quarter, and, immediately on withdrawing the stilette, the fluid flowed out *guttatim*; afterwards, in a gradual but gentle stream; and lastly, in drops rapidly succeeding each other, but without the slightest tinge of blood, or of any other extraneous matter. Four ounces and a drachm, by measure, of a clear straw-coloured fluid were evacuated in the space of five minutes: the sides of the head all the time were gently supported by the hands of Mr. Bampfield. The child did not seem to suffer any pain or uneasiness during the operation; the pulse beat 140 in a minute, about the same as it usually did before the operation; the skin was all along naturally warm, and the breathing as usual, though the infant foamed a little at the mouth; but this the mother said it had often done before. Whilst the water was evacuating, the eyes appeared to be a little more animated; the pupils were a little more visible; and, in a general point of view, the child

appeared as if it felt relieved. Two small pieces of adhesive plaster were placed cross-wise on the wound, and the whole head supported by an uniform bandage. The child was left to repose quietly, and to be kept in the horizontal posture. No medicine to be given.

Six o'clock P.M.—Very comfortable.

Ten o'clock P.M.—Sleeping, with less sonorous respiration than formerly, and has cried "loud" for food; a circumstance most gratifying to the parents, the child, of late, having "mourned" more than cried out.

16th, eight o'clock A.M.—Seems refreshed from his sleep; is more animated, and has required food only once; breathes with regularity and freedom; bowels moved once without medicine. Pulse natural, though rather quick (154); no thirst; makes water well. The head feels less hot, and the countenance is very good.

Four o'clock P.M.—Very comfortable.

Eleven o'clock P.M.—In a comfortable sleep.

17th, Meridian.—Has had two natural evacuations. Is in every respect much better, evincing increased sensibility by crying when dissatisfied, and smiling when pleased. The frontal projection is much diminished; consequently the eyes are more in view, and the pupils are continually to be seen; the face also, from the same cause, is less triangular, the cheeks wider and plumper, with a slight florid hue. The veins about the temples, upper part of the nose and orbits, are nearly empty; the head cool. The bandage remains a firm and uniform support.*

18th.—Pulse 125; has had one stool only; in other respects much as yesterday, excepting that his powers of vitality generally appear to be less than yesterday.—To have a little castor-oil in the evening, if necessary.

19th, three o'clock P.M.—He has had two evacuations without the oil; slept well and naturally; pulse 124. But there is still an apparent want of vitality about him. The bandages were removed, and the frontal and parietal bones were found to be much approximated, the integuments flaccid, and the circumference of the head measured twenty-two inches. It was determined to introduce the trocar again, which was accordingly done on the left side, nearly opposite to the first puncture; but, owing to a small spicula of bone coming in contact with the instrument, and thereby impeding its free admission, I relinquished the operation, but not until about two drachms of fluid

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* This day I received the following letter from Mr. BRANDE:—

"My dear Sir,—Like all other encysted fluids, that which you have sent me is a weak solution of albumen, but so weak, that it scarcely acts upon the most delicate tests. Muriate of soda is very perceptible in it.

"Your's always, W. T. BRANDE."

were evacuated. A great degree of langour supervening, adhesive plaster and a firm bandage were again carefully applied. The pulse was 120, after the bandage was applied.

Night.—Has rallied, and is comfortable.

20th.—About two desert-spoonsful appear to have escaped through the opening. The bowels are freely open, and he is in every respect as reported on the 17th. Upon inquiring more minutely for the cause of the unfavourable appearances which existed during the last two days, I find that he has cut his first tooth last night or this morning; and that, since it appeared, he has changed for the better.

21st.—There are other teeth coming through, and he is evidently labouring under irritation from this cause. Bowels open. Dr. Webster, who has seen him, has prescribed for him.

22d, three o'clock P.M.—Bowels open, pulse 144, and in every respect he is better. The circumference of the head is twenty-two inches. Introduced the trocar on the right side, near the first puncture, and drew off five fluid ounces, of a deeper straw colour than before. Whilst replacing the bandage, he became so faint, cold, and exhausted, that he had the appearance of dying; but, by the use of stimulating measures, he gradually recovered.

Six o'clock P.M.—Quite recovered. The cranium is very flaccid, and the bones are distinctly separate.

23d, eight o'clock A.M.—Is much better to-day, and is more lively. Pulse 125; two sufficient evacuations. The head looks much smaller, and feels much lighter.

From the 24th to the 27th, the child remained perfectly well, and gained flesh, with florid lips and cheeks. Bowels open without medicines, and the pulse varying from 140 to 148.

28th.—Circumference twenty-two inches and a half; the head again tense, but not so much so as before the first operation. Stools natural; pulse 144; and in other respects much as usual. Introduced the trocar on the left side, between the frontal and parietal bones; and, from the obstruction which there was to the exit of the fluid, I conclude that a portion of cerebral matter must have entangled the instrument: however, at the expiration of seven minutes and a half, three fluid ounces were collected. The child then became cold, and disposed to faint, which induced me to withdraw the instrument, and close the wound.

29th.—Very well.

30th.—Slight diarrhœa; otherwise well.

November 1st, three o'clock P.M.—Until this morning the child has been going on remarkably well, scarcely having suffered any thing from the repeated operations, which certainly always relieved it. About five o'clock this morning, the mother says, the child was suddenly seized with a violent attack of fever,

hot skin, thirst, very restless, frequently screaming as if in pain, and the head very hot. These symptoms were followed, in the course of a few hours, by a very copious perspiration. I removed the bandage, and found the surface of the scalp red and inflamed, the head shining and tense; and the blood-vessels of the integuments, as also those on the eyes and nose, very turgid. The countenance expresses great anxiety; he screams often, and is very restless. Three evacuations yesterday, but none during the night or to-day; urine scanty; and pulse 120, and feeble. —To apply cold to the head constantly; and calomel, with saline aperients, to be taken internally.

Ten o'clock P.M.—Less heat on the head; has been purged; the pulse 135; less moaning.

2d.—Passed a tolerably good night; fever less; has had two evacuations, and has passed more urine; skin cool. Redness on the scalp much subsided, and the head is less hot and tense; countenance more composed. The tongue is white; and, although the pulse is 160, still the child seems much better. The circumference is twenty-two inches and a quarter.

3d.—Pulse 140. The erysipelas is subsiding, and the child is better.

4th.—Better.

5th, two o'clock P.M.—The child is now nearly in the same state of health as previous to the attack of erysipelas. The circumference is twenty-two inches and a quarter. I introduced the trocar on the right side; and, in rather less than five minutes, I drew off three ounces and a half of fluid. He bore this operation very well, and appeared to be much relieved by the evacuation of the fluid.—The application of cold to be continued.

Night.—Very comfortable.

The 6th, 7th, 8th, 9th, and 10th, were passed in good health, the child appearing free from complaint.

11th.—For the last twenty hours, the breathing has been laborious. The circumference of the head is twenty-three inches and a half. Introduced the trocar on the left side, and three ounces of fluid were drawn off in four minutes: the fluid escaped in a stream. I will here remark, that the fluid, at each subsequent operation, was clearer than at the previous one.

Half-past five.—The relief obtained is not so great as from former operations.

12th.—Very comfortable.

14th.—Removed to his own home, No. 5, Margaret-street, Bagnage Wells-road, Clerkenwell.

19th.—The scalp is inflamed around the two last punctures, and there is oozing from the one last made. The external veins are very turgid; the parietal and frontal bones are closer to each other; the fluctuation is less distinct. The circumference is

twenty-three inches. Pulse 120. Respiration is to-day more hurried and shorter than of late. The bowels act sufficiently without medicines, and the parents consider the child much better.—The puncture to be deferred; a moderate firm bandage is applied, and cold application to be continued.

23d.—I learn that, a very short time after I made my last visit, about four ounces of fluid oozed out from the last-made opening, and that the respiration shortly became natural. The circumference is twenty-three inches and a half. Pulse 140; bowels natural; extremities warm; the countenance is improved, and the child is more intelligent, and sleeps much less. Fluctuation between the bones is less distinct, and the head consequently feels firmer: therefore, although the head is not diminished in the circumference, I have determined to postpone further measures for the present, to apply a bandage to the head as a support, and leave the case to nature.

26th.—Symptoms of pressure increased in a slight degree; otherwise the child is well.

30th.—He is drowsy and heavy, and other symptoms of compression are more manifest; but in other respects he is well. The circumference of the head is twenty-three inches and a half. From the anterior tip of one ear, the string being carried backwards to the same point of the other ear, is fifteen inches and a half. From the same point of the ear, carrying the string directly over the vertex to the same point of the other ear, is fifteen inches and a half. Made a puncture on the right side, and evacuated three ounces and seven drachms in eight minutes. The fluid is much clearer. The symptoms of compression subsided, and the bandages were applied as usual.

December 4th.—The physical functions natural, and the parents perceive a considerable increase of moral development, and are much gratified.

9th.—Symptoms of compression returning: the circumference of the head is twenty-three inches and a half. Punctured on the left side, and drew off three ounces and a half of fluid, in the course of four minutes and a half: the colour of the fluid paler. The health natural.

14th.—In every respect well.

20th.—General circumference of the head is twenty-three inches and a quarter. Introduced the trocar on the left side, and, in seven minutes and a half, four ounces of fluid were collected: it passed out almost *guttatim.* Health as before.—Applied the bandages as formerly.

27th.—He has had, within the night, frequent convulsions, and I find several teeth are forcing their way through the gums. He is wasted; but his bowels, pulse, and respiration, are little

disturbed. The scalp is loose.—Ordered the gums to be scarified, and aperients to be taken.

28th.—Convulsions frequent and severe during the night, and in the interval he falls into a comatose state. The gums, through neglect, have not been lanced; but, upon lancing them, several teeth appeared, and the child became tranquil. General circumference is twenty-two inches and a half, and the scalp continues loose; but there is evident fluctuation. Punctured on the right side, and drew off, *guttatim*, two ounces in five minutes; but which was accomplished chiefly by pressing the sides of the cranium together.—Bandages as before.

30th.—Continues to get worse. Head as before.

January 5th.—He is much wasted. Frequent, violent, and severe convulsions, and after each he is quite exhausted. His pulse is small, and very quick; breathing hurried; bowels are now confined, and his evacuations are very offensive. He refuses his food. Upon removing the bandages to examine the head, a gurgling noise was heard; the scalp instantly became loose and flattened, and the bones overlapped one another, but the circumference was twenty-two inches.—Re-applied the firm and uniform bandage, and removed portions of the gums from several teeth. Cordials, and mercurial purgatives, were directed.

6th.—Convulsions continue, and the child is fast sinking.

7th.—He died.

Sectio Cadaveris, fourteen Hours after Death.

The external appearances of the head.—The scalp over the anterior fontanel was flat and sunk inwards, rendering the edges of the bone prominent. The circumference of the head was twenty-two inches. The coats of the left eye were ruptured.

Internal appearances.—The dura mater was much thickened, and it adhered very firmly to the inner surface of the cranium. The pia mater distinctly inflamed. The surface of the brain smooth, exhibiting no appearance of convolutions; and, on cutting into its substance, it was found to be only about one-sixth of an inch in thickness: nevertheless, it was composed both of cerical and medullary matter. There was no vestige of corpus callosum, corpus striatum, thalamus nervi optici, fornix, septum lucidum: in short, the various parts usually found in the cerebrum were entirely absorbed, and the space filled up by one large bag, which was lined by an adventitious white membrane, exceedingly firm, and of about the thickness of ordinary writing paper. The bag was divided into cells by broad, flat, membranous bands, taking the course of the lobes, and contained about thirty-five ounces of fluid. These bands appeared to be plexus choroides, or prolongations of the pia mater. By

minutely inspecting the adventitious membrane, the small apertures made by the trocar at the different operations were visible; but similar ones could not be found in the small remaining substance of the brain, or in the dura mater.

The cerebellum was firmer than usual; as also the optic nerves at the fore-part of the sella turcica; but no other appearance existed worthy of notice.

Hanover-street, Hanover-square; Nov. 4, 1824.

ART. IV.—*Sketch of the Medical Topography of Malta.* By —— TULLY, Esq. Deputy Inspector of Hospitals; Author of the "History of the Plague of Malta."

THE Island of Malta rises nearly in the centre of the Mediterranean, between the fifteenth and sixteenth degrees of east longitude, and between the thirty-fifth and thirty-sixth degrees of north latitude. The island is every where extremely narrow, its greatest width not exceeding ten miles, and we find its circumference only marked at sixty miles. What the original extent of the island was, or whether it formed a part of the continent of Africa, is a question which has frequently attracted the notice of the historian, and one which, in all probability, will for ever remain involved in obscurity: certain, however, it is, that at some period the island must have been of greater extent than at the present day, as vestiges of roads are now distinctly traceable to the verge of the precipices overhanging the sea, to the southward of the island, and that point lying opposite to the coast of Africa; and the neighbourhood of these precipices is the only place where a landing is not practicable, the coast every where else being easy of access. There are circumstances, when considered, that lead us to conjecture, that not only Malta, but even Sicily, formed part of the continent, and having been separated from it by some extraordinary convulsion of nature: for, on examining the strata of Malta, we find its direction to lie, as near as possible, SSW. by compass, forming a direct line, and leaning towards the opposite land of Africa; whilst the opposite point would, in a continued line, touch Cape Passaro in Sicily. This direction corresponds, in some respects, with Grenough's statement, who, in his "Geology," tells us, that the strata of Syracuse agrees with that of Malta; and brings forward other reasons, foreign to our purpose, for believing that Malta had formerly been joined to a high land.

The land of Malta is throughout extremely low; the greatest point of elevation (which we find to be St. George's, in the neighbourhood of the Bochetta,) not rising 1200 feet above the

level of the sea; and the next highest range sufficing only to facilitate the conveyance of the water of the aqueduct to the capital; and these ranges, as far as I can judge, have a claim to the primitive order. Indeed, so low does the land appear, that, upon approaching the island, under the most favourable circumstances of weather, it is not discernible until you arrive within five and twenty miles of the shore.

The appearance of the land is by no means prepossessing,—scarcely gratifying even to the sea-sick traveller; as it offers to the eye little more than a succession of broken calcareous rock, leading, upon the first view, to the idea of the whole surface having been artificially prepared, and ready for the lime-kiln.

This appearance of the general face of the country is chiefly owing to the peculiar nature and undulating form of the ground, —a large portion of the whole of the territory of the island being partitioned into small terraced plots; a precaution in cultivation, in Malta, indispensibly necessary; without which, much of the soil would be in danger, both from the looseness of its texture and its great lightness, of being washed away by the heavy rains that frequently fall during the spring and autumnal months. From this barren and uninteresting view, our attention is at once attracted to the superb harbour of Malta, almost every where crowned with majestic buildings: the city of Valetta, with its suburb Floricanea and Fort St. Elmo, on the right; and, on the left and continuous line, the outlying fortifications of Ricasoli, St. Angelo, and the three cities, Vittoriosa, Burruch, and Singlia. Besides these principal residences, Citta Vecchia deserves to be named, although in the interior of the country,—not only from its extent and situation, which stands upon the highest habitable part of the island, but from its having been previously the capital of the island. Independent of these four cities, we observe twenty-two *casels*, or small towns, dispersed throughout the island, affording ample accommodation for the inhabitants.

The situation of Valetta, the capital of Malta, is peculiarly happy, both for health and commerce, placed as it is upon a peninsula, having on either side an excellent harbour; whilst its southern extremity is washed by the sea. The houses in Valetta (and, generally speaking, those throughout the island,) are large and commodious: the rooms are of a height unknown in our own country, and the windows are proportionately large; the walls are extremely massy, being from three to five, and even six, feet wide; rendering them, upon the whole, admirably adapted to the climate. These buildings are formed of a soft free-stone, portions of the rock of which the island is composed; and, from the great facilities which its peculiar softness offers to the workman, it is readily moulded into all shapes:

hence the grandeur and magnificence of the public edifices, and most of the residences of the nobility of the island.

The residences of the poorer classes, where our attention in medical topography becomes more particularly directed, are, not only in Valetta, but throughout the island, as little liable to exception, both in point of dryness and ventilation, as any country with which I am acquainted: indeed, generally speaking, they are airy and comfortable; and, though many of them in the cities lie below the level of the neighbouring streets, and others, as in every other country, in cellars, nevertheless their interiors do not, as far as I have seen, offer those causes for insalubrity or disease, so generally met with amidst crowded populations, and discovered amongst the lower classes of society.

Valetta, and the principal towns above enumerated, are every where shut in by immense fortifications, which the successors of the great founder of the capital, whose name it bears, endeavouring to emulate his example, have greatly multiplied; but we find (contrary almost to a general rule) that these stupendous works rather contribute to, than detract from, the health of the inhabitants within their respective lines, as the prodigious depth, as well as the great width, of these ditches favour a free circulation of air; whilst the extent of the various outworks and glacis prevent the approach of crowded residences. Besides, these ditches being for the greater part cut through the solid rock, and no place, in any direction, left for the lodgment of water, or soil for the production of vegetable matter, (with the exception of a few spots, converted, with much attention and great labour, into vegetable gardens,) the evils generally attendant upon fortified towns, particularly in warm countries, are, from these causes, entirely avoided.

The principal, and, in fact, (as far as I can discover) the only evil which Valetta laboured under after its first figuring as a capital, was its precarious supply of water; but an element, upon which the health of the population so much depended, soon, under a provident government, became an object of a peculiarly important consideration. We find, upon the building of the city, that each house was provided with a private and spacious cistern: these cisterns were arranged with great care, and proportioned to the size of the dwelling, the ordinary number of inmates usually calculated upon for each residence, and mostly for a supply for two years. These cisterns were, and continue to be, supplied with rain water, conveyed chiefly, by numerous conductors, from the roof of each dwelling, which we find universally flat in the island, no doubt for the purpose of collecting water. But these precautions were found insufficient; and, for the better supplying the town, several public cisterns and fountains were built; the former chiefly within the

forts and military quarters, and the latter dispersed through the town. These were supplied by means of an aqueduct, built after an infinity of labour and expence, conveying excellent spring-water upwards of 17,000 English yards; the advantage of which is still felt. Upon the completion of this aqueduct, many private houses were permitted to establish pipes of communication; by means of which, in times of scarcity of water, they may be supplied from the public reservoirs.

In no modern town, with which I am acquainted, has more attention been paid to the construction of public sewers, than in the capital of Malta. The town was built in the flourishing days of the Order, when it is evident that no expence was spared to execute a plan, which, as far as local situation would permit, was perfect in all its branches. The plan of the sewers appears to me to have been taken from those of Rome, constructed in the days of her greatness. I need not add, that, in regard to the relative size, an enormous difference exists; but I mean to be understood, that the principle upon which they are formed is one and the same. In Valetta, we find that every street is furnished with a deep and spacious sewer, or rather a canal, upon an inclined plane, sufficient to prevent any great lodgments of filth; and these are every where so secured and covered in, as to prevent most effectually the escape of offensive effluvia. All these canals have a free communication with the sea, and are so constructed that the least defect can be immediately detected, and remedied without public nuisance. Each house has a direct communication with a sewer, and dirty water, water from washing (which is chiefly done in town by the natives), rushes, by means of house-drains, into the sewers, carrying with it the daily foul accumulations, to the regular reservoir; from whence, by its specific gravity and the nature of the ground it passes, it is constantly propelling itself forward to its natural outlet; when, intermixing with the sea, no evil can ensue. Hence, although there is no fall of rain frequently for six months in succession, no inconvenience whatever is felt; nor can the nicest sense of smell detect the existence of these conductors in the streets; and this in a climate and at seasons peculiarly adapted to the development of noxious effluvia.

We are not here to confound with this statement the effluvia which, in every town and in every country, must arise, and be perceptible, within the immediate sphere of public necessaries; but even this I consider to be as little felt in Valetta as in towns situated in much milder degrees of latitude. These sewers are, as may be concluded, thoroughly cleansed annually by the successive columns of water that sweep through them during the rainy seasons.

Previous to the plague, all ranks were buried within the

churches; but, since that period, this has been confined to the higher and middling classes, whilst the lower orders, both of towns and casels, are interred in appropriate places, removed from the public residences, carefully walled in. There is a separate burial-place for the British: the situation is well adapted within the Florian lines, but, as the ground is newly made, and by no means close or compact, (having been formed from the debris of the neighbouring land, it requires occasional inspection, that the grave should be deep; and, when vaults are not used, according to the different seasons, quick lime ought to be mixed with the covering ground. I notice these particulars, having been called upon, some time since, to report upon the subject to government. Notwithstanding the frequency of the custom of burying within the churches, it does not appear that any evil has arisen from a practice, which is held up as so dangerous in hot countries.

The principal buildings in Valetta are the palace,* the hotels formerly the residence of the various knights of the Order, and now for the most part occupied as military quarters, the Treasury, the Palace of Justice, the church of St. John, the library, the hospitals, both civil and military, and the barracks.

To enter upon a minute description of the public buildings, I conceive to be entirely foreign to the views of the medical reporter, particularly as they can only refer to those periods when the fine arts were more happily cultivated in the country. The exterior of most of these buildings are in a high state of preservation; some of them, as the Auberge de Castille, being, as far as my slender knowledge of the matter leads me, perfect models for the architect.

It is a current, but very erroneous, opinion, that Malta is little more than a barren rock; and certainly, as I have stated, the first appearance of the island would lead to the belief: and it was also an opinion, which received some credit from the writings of Brydone, that such was at one period the nakedness of the rock, that it had been dependent upon Sicily for the soil which afforded its inhabitants the means of subsistence. But a more intimate knowledge of the country than what Brydone appears to have had, satisfies us of the fallacy of the assertion; and I am inclined to believe that our author, in giving his opinion upon the subject, followed the general belief of the time he wrote. In the first instance, in no part of the island do we meet with a soil similar to the heavy and rich loam of Sicily; and in every part, save the southern extremity in the African line, (where the soil is the red argillaceous,) the soil is the

* Some idea may be formed of the size of this structure, when we state that it was upwards of five years building, although a prodigious number of persons were employed,—a number frequently exceeding six hundred.

same, and evidently native; for we find it to consist of clay, largely intermixed with a sand, or gravel, corresponding with the bed of rock over which it is laid, and the greater part of the soil evidently formed by the same process,—a process which may almost be daily noticed in one part or another of the country, as patches of the rock are constantly under the hammer, and worked for the purpose of cultivation. The very superficial tenure of the greatest part of the soil of the island is almost proverbial amongst the inhabitants, and is one of the principal causes to which we may attribute the great salubrity of the air; and to which we might add the porous texture of the rocky foundation, ready to absorb all superfluous moisture. The mode of what the peasant terms making the soil, is necessary to be understood, as its quality cannot detract from, but materially tends to a pure atmosphere. The following is the plan I have seen adopted, and that which I believe is the general practice:

The rocky ground intended to be reclaimed is first cleared of all loose stones and earthy substances, which may be scantily lying on the cliffs and interstices of the rock: these are carefully heaped together on the most level spot of the rocky surface about to be worked. The labour then commences, which consists in breaking down the rock into fragments; a task of no small difficulty,—for, although the stone is particularly soft, yet the external surface, exposed to the action of the air, is hard, requiring in the onset a very large share of labour. The breaking-up of the rock is persevered in until the whole becomes level. In this manner they proceed until a flat is formed of about half an acre, which is occasionally propped in various parts by massy stone walls; a work which entirely depends upon the inequality of the ground, and thus arranged for the reasons already mentioned. In the general process, there is seldom less than three feet horizontally broken of the rock, when a thin layer of earth is, for the most part, discovered. If the layer at this point is not complete, the rock is generally found full of crevices of various sizes, as if it had been acted upon by some external agent, and these crevices are invariably found filled with a rich clay. Here the great labour terminates, and the whole is now, with great industry and care, mixed together.

What is thus denominated "new-made ground," and which, as we have shown, mostly consists of broken-down free-stone, very early offers proofs of fertility; and, from its great aptitude, in its new form, to the absorption of moisture from the atmosphere, its bulk very perceptibly increases, and soon forms a sort of concrete texture. Those plants which require least nourishment, as the cucumber and water-melon, are the first

reared, and are generally found to flourish the succeeding season. The products next in succession that are reared, demand, like the former, no great nourishment from the newly-made soil. Thus, with the occasional aid of small portions of manure, and the vegetable remains, which are allowed to decay upon the ground, a daily improvement is observed,—so much so, that corn is usually the growth of the third year; and it is by this and similar processes, that a large portion of the ground of Malta has been brought to agricultural purposes, and by subsequent care, aided by climate, rendered extremely fertile.* Indeed, such is the fertility of the soil, that the common observation is, that it is always producing.

From what has been said of the soil, the implements of agriculture will readily be believed to be, what they truly are, extremely simple; nor will it be expected that much labour is necessary in ploughing: in fact, a light plough, worked by an ox and a mule, is generally sufficient,—always, when the ground to be ploughed is level. The hoe is the other principal implement of the husbandman.

We find the general produce to be wheat, barley, oats, Indian corn, cotton, cinnamon, aniseed, lichen,† hay, and a species of clover called silla,‡ which is indigenous; to which we may add, almost every species of fruit and vegetables, and both one and the other, particularly the latter, in great abundance and tolerably good. The nature of the soil, as well as the great value of land, renders it inapplicable to pasture: there is, therefore, very little of it used for this purpose; consequently, most of the cattle, particularly the larger class, are stall-fed.

Among the various products, the cotton is the most esteemed, forming not only the staple commodity, but likewise an article of great profit, no part of the plant being without its use: the seed, formed into cakes, is the chief food of the larger cattle, which makes the beef of Malta so much esteemed; whilst the leaves afford nourishment to the smaller animals, as sheep and goats: with the latter of which the island abounds, being of an excellent species, yielding immense quantities of milk, and of a good quality.

We have now seen how much the soil of this island must contribute to the general health of the inhabitants, and, upon fur-

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* Notwithstanding the fertility of the soil of Malta, the inhabitants are indebted to foreign countries for a large portion of the common necessaries of life. The island only grows corn for six months; the rest is imported from the Black Sea and Egypt; wine and oil from Sicily, and other parts of the Mediterranean.

† The lichen is used as a dye.

‡ The silla is denominated, by Tournefort, *hedysarum clypeatum flore suaviter rubente.* It grows from three to four feet high; the colour is beautiful; it is extremely luxuriant in its growth, and gives an exceeding rich appearance to the ground where it grows; and is in full bloom the latter end of March.

ther examination, we shall find the influence it produces upon the atmosphere: for, admitting the peculiarly absorbing quality of the soil, it necessarily follows that the atmosphere must at all seasons contain a very diminished quantity of vapour, compared to countries enriched by a heavier and more retaining earth, giving advantages, from this effect alone, to the climate of Malta, and rendering it thereby more adapted to health than the climates of the surrounding states. That this is the case, experience also proves: nevertheless, as the subject is one of importance, it behoves us clearly to point out the actual superiority which the island possesses, and how free it is from the general causes of insalubrity that mark the neighbouring countries.

In the neighbouring islands and continents, where marsh is prodigiously fertile, the health of the inhabitants in their vicinity is found constantly to change with the seasons; and where marsh predominates, and is aided by these particular constitutions of the air, which occasionally spread their influence over immense tracts of land, those epidemic diseases arise, that are become so common a scourge to the human race; and the severity of the reigning disease is felt according to the nature and extent of the predisposing causes. Now, as regards Malta, the first and best proof we can offer in favour of the climate, is the absence of all epidemic diseases; and the next, as we have shown, the want of material for the formation of marsh. However, in stating thus much, I am quite aware that a different opinion is maintained by some; and that the plague of 1812 is even considered as an epidemic visitation. Dr. Hancocke, in a late work upon the "Laws of Contagion," certainly wishes to impress this opinion upon the public; and he is equally desirous that it should be believed (as it falls in with his own theory) that the island is no stranger to marsh, without which, much of his ingenious argument would necessarily fall to the ground; but that this is not the case, I think I shall be fully able to prove: at all events, if any thing of such a nature is found to exist, it must take a more appropriate term than that of marsh,—unless, indeed, that my ideas of marsh are proved to be erroneous.

In speaking of marshy countries, our ideas naturally become associated with the term in its received interpretation, or what we ourselves are accustomed to consider as marsh: hence, we conclude that large tracts of uncultivated land, rich in soil, and in vegetable matter in a constant state of decay, abundantly supplied with moisture in undrained portions, constitute what is generally understood as marsh; and, according to the different degrees of solar heat, shall these exhalations arise, that, combined with other causes, as yet very imperfectly known, will produce those evils above noticed, and to which countries

variously situated are exposed, producing, according to climate, those varieties of fever included by nosologists under the different heads of intermittent and remittent, in all their various forms, from the common quotidian up to the yellow fever. This is my opinion of what marsh and its consequences are; and, in adverting to the name, the mind naturally dwells upon what we are wont to denominate as such; as the Pontine marshes in the Roman States, the Lentine swamps in Sicily, the extensive marshy flats of Bucristro, those of the Venetian States, and the extensive fens of England, those never-failing sources of ague; and, to bring the matter closer to this place, the marshes of Catalonia, Santa Maura, and Corfu, with numerous others on the Mediterranean shores. But surely we are not authorised to designate a country as marshy, from which so many inferences may be drawn, and upon which so many false theories may be built, because deleterious exhalations (as we usually express it) may mark one or two spots of a territory, and because a few cases of intermittent and remittent fevers may annually be noticed amongst a population amounting to upwards of a hundred thousand souls. The truth is, there is no country, however happily situated, where some local causes will not be found to co-operate to produce diseases of this character, particularly in the countries exposed to high atmospheric temperature: thus, in some places, uncleansed ditches and blocked-up drains, crammed with decaying vegetables; and, in others, large open wells, used for watering vegetable-grounds, (as we frequently meet with in Italy and Sicily,) in which the vegetables are dipped for the purpose of freeing them from their outward leaves, previous to their being sent to market, and where, from want of attention, they are allowed to float upon the surface frequently in large quantities, and from which, like the former, exhalations arise during the summer-months, capable of producing both remittent and intermittent fevers amongst those residing in the immediate vicinity, as I have frequently had occasion to observe: and I may assume, that I do not go beyond the bounds of reason, when I say, that our very kitchens, if they are permitted to retain vegetable matter in a state of decomposition, may, under certain limitations, produce the effects of the worst marshes upon those exposed to such peculiar miasma; and it will be found that these various causes, with many others of a similar nature, will, as I have above stated, frequently exist in the healthiest countries. It is not, therefore, because fevers of a particular type are occasionally to be met with in the island, that we are to conclude that they are necessarily the offspring of marsh. We know to the contrary; and, if we except the Marsa, presently to be noticed, the causes of these fevers, wherever they do exist in the island, must be traced to one or

other of the sources just mentioned; whilst one of the chief predisposing causes will be discovered to depend upon the want of proper aliment, as we find these diseases only traceable to the poorer classes of society; and that this is the case, our knowledge of the country, and its inhabitants, warrants us to assert.

Dr. Faulkner is the last author who has given us a "Sketch of the Medical Topography of Malta;" and so cautious is this writer upon the subject of marsh, as connected with the island, that he says "there are only *three spots* upon the habitable part of the rock which can deserve to be called marshy, or even moist, —the Marsa, Messida, and Puales." In my "History of the Plague of Malta," I have noticed the Marsa alone, from the conviction that neither the Messida nor Puales were worthy of being named; nor would I have entered upon any explanation of the nature of either one or the other, had not this difference in our statements been noticed by Dr. Hancocke, who, from a feeling too evident, gives the credit of correctness of statement to Dr. Faulkner; although, were I even to admit that these marshes did really exist, they could have but little weight, indeed, in bearing the learned author out in his assertions. But, as the subject is now some time before the public, I think it as well not to pass it entirely unnoticed.

It appears to me that the ground called La Marsa derived its evil from far different causes to what its name has been erroneously supposed to imply,* being nothing more than a piece of level land at the head of the main harbour, from whence the sea, in the course of years, has been gradually receding, and as gradually filling up by alluvial deposits from the neighbouring high grounds; and which, to this day, is subject to inundations of the sea in that part yet unfilled, during the prevalence of the north-east winds, that blow directly into the harbour, rolling its sea onwards, uninterrupted, from the Adriatic. That such is the nature of the ground, we have the most undeniable proof; as the sea was known, within the memory of many inhabitants, to have covered the fine cultivated vale that runs from the Marsa close to Casal Curine.

The heads of all harbours that run into shallows, and particularly those shallows that are occasioned by the natural tendency, on particular shores, to the receding of the sea, become (as far as my experience goes), under certain circumstances, to

* The term *Marsa* has been generally considered to imply Marsh, when, in point of fact, it means Port, being the Arabic for port, or rather anchorage; and is likewise applied to all the principal ports in the island,—as Marsa Mucetto, Marsa Skalli, and Marsa Sirocco. This is particularly noticed by Fiancesco Correggio, in a work on Malta, in the Spanish language, printed at Barcelona in the year 1568.

the full as fertile sources of disease, in warm climates, as the best-formed swamps, producing all those alterations in the surrounding atmosphere necessary for the production of the most fatal fevers; owing, as we may presume, to the rapid decomposition, in the appropriate seasons, of the marine matter constantly thrown upon these flats, from the occasional rising, as well as from the ordinary agitation, of the sea, leaving, upon the subsiding of the water, larger deposits in some places than in others: and this we find to be the case in the ground we allude to; nor can it be expected that these causes will entirely cease in their effect, until they are totally removed either by nature or by art. The former by the gradual, but certain, receding of the waters in all those low situations where it is once observed to commence, and by the subsequent filling-up of the whole by alluvial deposits; a process more readily effected in countries subject to sudden and heavy falls of rain after long droughts; and the latter by well-formed embankments, by which means the ground, thus defended against the future inroads of the sea, will, after a certain lapse of time, whether cultivated or otherwise, be entirely freed from all offensive matter, and the surrounding atmosphere, by the removal of the cause, be restored to health.

It is to the former of these causes, as I have elsewhere said, that we must attribute the evils of the Marsa, as well as the subsequent amelioration of the air, and the decline of what was denominated the marsh; and, if the same operations of nature proceed undisturbed, we may look forward, without any great lapse of time, to the whole being under cultivation; but, as the territory of Malta bears but a small proportion to its population, in all probability these tardy operations will be superseded by the industry attendant upon an over-stocked country. Indeed, we already observe that daily exertions are made to reclaim the remaining space. But, even admitting that these sea-swamps, as we may term them, were more general, I conceive that, from their peculiar character, they must be viewed in a very different light to those natural swamps, the unhappy inheritance of many countries: for, in the first instance, they, for the most part, cover but a very limited extent, and are seldom permanent; and, in the next place, they are generally capable of being removed when they are found injurious, from their vicinity to habitable places. Besides, in all cases which have come within my own knowledge, although the effluvia from these grounds was proved to be most destructive, yet the sphere of its action, unlike the miasmata of marshes, was extremely limited, scarcely exceeding its own boundaries.

We shall now proceed to examine the marsh of Missida, which will not occupy much of our attention. It appears, then, that

many years back the head of the Marsa Muscetto, or quarantine harbour, offered a similar aspect to that of the Marsa, although not to the same extent; and that, by the united operations of those causes we have just stated, the whole has been filled up, and either cultivated or built upon, with the exception of a small space kept as a fish-pond, for the supply of small fish in times of scarcity: and this is, bona fide, what has been denominated the marsh of Missida, and one of the hydras of the non-contagionists of plague; and another melancholy proof how far deep-rooted prejudice may lead us. Of this marsh I shall only say, that, as if it were purposely to detract even from its right to the name of a stagnant pool, we find a stream of excellent spring water entering it, and flowing onwards into the sea, to which it is quite contiguous; and this pond is also frequently refreshed by sea water, purposely arranged.*

Having noticed these two points of importance in the medical topography of the island, we now come to the last ground to be described—Puales; no more entitled, in my opinion, to the name of marsh than the preceding. The valley of Puales, situated at the north-western extremity of the island, is one of the most fertile and best cultivated pieces of ground about Malta: it is bounded, at either side of its inland extremity, by rising grounds, in an equal state of cultivation; these grounds gently sloping until they are gradually lost in forming the vale, which from thence continues in a level form, until it terminates at the water's edge; where a solid wall, about six feet in height, is run across, to prevent the encroachment of the sea. The situation of this vale, at the extremity of St. Paul's Bay, from which it takes its name, is extremely interesting, and particularly advantageous to the husbandman; as we observe that the neighbouring rising grounds are enriched by several springs of excellent water. These springs, after watering the adjacent fields, (for which purpose the water is turned off in various directions,) continuing their course along the low grounds, is collected by means of artificial cuts, that conduct the water to the sea, through openings purposely made in the wall. It is the ground through which these cuts (or, more correctly speaking, drains) are made, that I presume has been noticed as marsh; as it is the only spot in the neighbourhood where I could discover any lodgment for water: and, from an accurate examination of the ground in question, aided by Surgeon Fiddes, of the 85th regiment, I feel little hesitation in saying, that the very worst part of Puales bears no affinity whatever to a marshy

* So long back as the year 1772, this spot was considered nearly in the same point of view. Misida: Peschiera, o picciolo ricetto d'acque salmastre sorgenti, che servano a curare, ed ammollire j Lini, e le tele: dove, da poco tempo in quâ, si conservano Pesci, che vi si racchiudono."—CIANTAR, lib. i. not. i. p. 121.

soil. The vale of Puales has been noticed as being particularly well cultivated, and we trace this cultivation, on the north-western side, to the very wall of embankment; whilst the remaining and only space which has not been apparently for some time under the plough, occupies, to the best of my judgment, somewhat about three English acres: and it is through this uncultivated spot the four drains have been cut for the purposes already mentioned; and we find that not one of these drains is formidable from size, as it did not appear to me that the largest exceeded eighty yards in length, and the width of the broadest was certainly not more than a stepping distance. As to the ground itself, it is what I would call a good firm sod, (for, in cantering over it, little more than the impression of the horses' hoofs were observed,) without a single shoot or rush to impede the foot; having much more the appearance of a moist grass-plat, closely eaten down, than that of a marsh. It should not pass unnoticed, that this ground was visited by us in the month of December, when, of course, it must have been much more moist than during the parching months of summer and autumn. It is to be observed, nevertheless, that (according to the best information) the few inhabitants in the neighbourhood of Puales have, for years past, been subject annually to attacks both of remittent and intermittent fevers; and it may reasonably be supposed that it is owing to these occasional occurrences, that the formidable term of marsh had been applied to this ground, and most likely because it was the readiest mode of accounting for these febrile attacks, as well as the least liable to objection. To the sufferer it matters little what the disease is occasioned by, so long as it continues to be produced; and it is probable that a minute investigation of the real causes of disease amidst the scattered peasantry, brought together under particular circumstances, would never have taken place, but continue to be imputed to the same cause, had it not been for the doubts raised upon the subject by Dr. Hancock.

[To be continued.]

Art. V.—*On Snuff-taking*. By Dr. Kinglake.

The practice of snuff-taking is, perhaps, the most baneful that popular custom and familiarity have sanctioned as innoxious and gratifying. It is scarcely conceivable to what an extent of misapprehension and fallacy, an authorised and an unsuspected habit may lead. It has rarely occurred to those who use snuff, even the most largely, that it is an agent possessing qualities that cannot fail to prove highly deleterious to the healthy tone and energy of the stomach.

Tobacco, of which snuff is the comminuted division or powder, is undeniably amongst the most powerful class of narcotic substances, and, were it to be taken into the stomach freely, it would exert an influence not less overwhelming and destructive than that which would arise from henbane, wolfsbane, deadly nightshade, hemlock, &c. In the whole tribe of narcotic vegetables, perhaps there is not one that would derange the healthy state of the stomach more deeply and seriously than tobacco.

Henbane, aconite, blue monkshood or wolfsbane, deadly nightshade, dogs-mercury, thorn-apple, common hemlock, bug agaric, pepper agaric, hemlock dropwort, water hemlock, laurel, &c. are severally resorted to as powerful medicines, designed to fulfil curative indications of extraordinary difficulty, but it never entered into the imagination of the most adventurous, to use either of these substances in the form and manner of snuff. When medicinally introduced into the stomach, it has been done in doses cautiously restricted, so as to prevent the possibility of any disastrous effect resulting from them. Were they familiarly taken like powdered tobacco or snuff, the most pernicious consequences would probably arise from such hazardous practice.

Snuff-takers do not advert to the route into which the noxious article is forced by the act of strong inhalation through the nostrils. It is neither supposed nor intended to pass beyond the anterior cavities of the nose; instead of which, it is carried through its posterior openings, commonly into the gullet; from thence, it finds its way into the stomach, and occasionally a portion will be apt to escape under the epiglottis into the trachea. In either case, immediate and distant mischief of a very afflicting nature is likely to ensue.

The stomach can no more decompose powdered tobacco, so as to render it comparatively harmless, than it can deadly nightshade, hemlock, or any other vegetable poison. It must therefore first disorder its healthy function, inducing dyspeptic ailment, morbid sensibility, and of course an endless train of distempered nervous feelings. The direct influence of tobacco on the stomach is in a high degree enervating, by which that organ is incapacitated for a healthy secretion of the gastric fluid, and for exerting the vital energy that is requisite for performing its digestive function. Loss of appetite, distressing sickness, gastric oppression, præcordial anxiety, acetous fermentation, flatulent distention, and deathly langour, are amongst the direct effects of admitting snuff into the stomach. The more distant injury which this hurtful agent is likely to occasion, may be perceived in the various sympathetic disturbance which a disordered stomach awakens throughout the whole system.

What vital function can preserve its healthy state amidst such overwhelming affection of gastric excitability?

The detriment arising to the stomach in the first instance, and secondarily to the system at large, is most insidious. The evil is incessantly working its mischievous course, without being at all suspected. In each succeeding portion of powdered tobacco that is incautiously snuffed through the nostrils, additional occasion is given for fresh and increasing injury, until at length dyspepsia and various nervous sensations accrue, which are familiarly attributed to any cause rather than to the real one. To impeach a favourite indulgence,—to charge with the cause of disease that which is held to be a harmless and gratifying excitement of the nasal cavities, would be regarded as wildly visionary, and wholly inadequate to such an effect. In this persuasion the use of the noxious agent is habitually and fearlessly pursued, until its morbific effects become sufficiently manifest to awaken serious apprehension.

Were either of the narcotic substances that have been enumerated, to be prepared for use as snuff, by the addition of such attenuating and stimulating ingredients as would fit it for pleasingly exciting the nostrils, the admission of the narcotic agent in this insidious manner into the stomach, would most likely very soon produce effects not dissimilar to those of tobacco. An article capable of operating on the living power of the stomach, like tobacco or any of the other active narcotics, cannot with safety be used as an inoffensive stimulant on a surface that has a direct and ready communication with the cavity of that organ, without incurring consequences of a very threatening nature. The magnitude of the mischief produced by this unknown or neglected cause is often irreparable. Prostrated, agitated, and variously distempered nervous power cannot be easily extricated and released from its almost paralised disabilities. Direct remedies for such ailments are not at hand, the poison is without an adequate antidote, and this consideration should seasonably warn the amateurs, the proficients, and the veterans in a practice alike uncleanly and unhealthy, to desist from it before it shall have incurably distempered and disorganised the structural as well as functional integrity of the stomach.

Rigid, absolute, and uncompromising abstinence from the pernicious custom of taking snuff, is the only preventive remedy of the numerous and often irremediable evils attending the indefensible usage. It probably under no circumstances could prove beneficial, whilst its injurious effects are various and frequently most embarrassing. It occasionally distempers the healthy action of the mucous membrane of the nostrils, inducing excoriations, polypous excrescences, and even ill-conditioned sores,

that may assume the irrestrainable extension and character of cancerous virulence.

Many instances have fallen under my notice, and more occur to my reflection, of but little short of mortal injury having accrued from a profuse and an incautiously violent mode of forcing snuff through the nostrils into the gullet and stomach. Morbid changes in the structure of the posterior fauces and in different portions of the œsophagus, occasioning diseased contraction of that tube, have been justly referable to the distempering influence of tobacco. The worst cases of indigestion and of mesenteric atrophy have been reasonably supposed to have originated from excessive chewing and smoking as well as snuffing of tobacco, in which, a negative remedy has been found in the discontinuance of the practice.

There is much reason for believing that the ever-memorable Napoleon Bonaparte derived the cause of his protracted suffering and eventual death, from the large quantities of snuff which he lavishly but unconsciously carried into the stomach through the nostrils, by the habit of strong and unmeasured inspiration with which he used that destructive agent. The diseased appearances of the stomach on inspection after death, termed cancerous, were those of an highly inflamed, much thickened, and extensively ulcerated surface, such as were very likely to have been induced by the noxious influence of tobacco, almost incessantly supplied by the frequent, abundant, and forcible manner in which that illustrious personage was notoriously known to take that powdered article.

There can be no more valid reason assigned for persisting in the undeniably hurtful custom of taking snuff, than there could be for that of any other poison; and whoever will inconsiderately incur the imminent risk of occasioning irremediable and destructive mischief by so baleful a practice, will find no admissible excuse either in the prevalence of the custom, in its unobjected currency, or in the transient gratification and notional benefit attending its use.

If strongly exciting the mucous membrane of the nostrils can be supposed, from its proximity to the brain, to produce a beneficial effect on that organ, the purpose may be answered by substances not less pungent than tobacco, and without any of its deleterious qualities. The effluvia of ammonia in either a solid or liquid form, the aroma of pepper, ginger, or any other simple stimulant, mixed with either powdered chalk, liquorice, or cinnamon, in such proportion as would render the composition sufficiently powerful moderately to irritate, without excoriating the nasal membrane, would be an adequate substitute for what may be regarded as the harmless agency of tobacco,

with a secure exemption from its pernicious influence. It is however not probable that the local excitement of the nostrils can ever prove salutary or advantageous, beyond the momentary gratification connected with the established habit of the practice; and as all unnecessary usages are rather nuisances than benefits, it would seem to be indispensably advisable to abstain from a custom that is unsightly in its appearance, preposterous in its observance, and in every conceivable view that can be taken of its effect, much more likely to become eventually injurious than useful.

As errhines, in sternutative intentions, various substances have been used for the purpose of exciting the minutely ramified expansion of the olfactory nerves on the mucous membrane of the nostrils. In cases of unyielding lethargy and comatose stupor, arising from cerebral oppression and other states of distempered sensibility, nasal stimulants may beneficially cooperate with suitable depletion in restoring nervous depression to a condition of natural freedom and energy. The close vicinity of the nostrils to the brain, with the direct nervous communication subsisting between those surfaces and that organ, explains the possibility of its being powerfully affected by remedies capable of provoking the concussive action of sneezing.

The most efficient of those medicinal substances are asarabacca (asarum europæum), herb mastick (teucrium marum), white hellebore (helleborus albus), yellow subsulphate of quicksilver (subsulphas hydrargyri flavus). Small quantities of either of these articles conveyed up the nostrils in instances of lethargic or apoplectic insensibility, in protracted syncope, and suspended animation, may be advantageously employed; and in attempting to fulfil such an indication of relief the design is purely medicinal, having no affinity to snuffing tobacco, and of course furnishing no warranty for that fashionable but offensive and reprehensible practice. The unnecessary use of errhines would occasion an unhealthy afflux of fluids to the nostrils, which would be at least a source of annoyance, if not of positive ailment. But the recited errhines have no narcotic or any other quality like tobacco, by which serious injury may be extended to the stomach, and more or less directly to the whole nervous system. In the use of snuff, it is less the stimulant impression on the nostrils than the transmission of the exciting substance to the gullet and stomach, that is denounced as mischievous, and reprobated as inadmissible.

Taunton, August 15th, 1824.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

Relating to the History or the Art of Medicine, and the Collateral Sciences.

Floriferis, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ART. I.—*Notice of a Mode by which a Conjecture may be formed as to the Sex of the Chick in Ovo.* By Mr. DAVID RITCHIE. (From the Edinburgh Philosophical Journal.)

IN physiology, it is interesting to ascertain at what period the embryo assumes a sex, and by what means its sex may be distinguished. In regard to viviparous animals, such inquiries are attended with much difficulty, as accurate dissection and minute microscopic observation are necessary. Such investigations, too, cannot be carried on without cruelty. Hence it is that physiologists have so often and so carefully observed and described the embryo in oviparous animals, from its first appearance in the egg till its complete development. For here the embryo may be subjected to examination without injury to the parent, and there is such similarity in the mode of growth of animals in the one case and in the other, that any fact ascertained as to the chick in the egg has usually led to a similar discovery in regard to the fœtus in utero. The appearances presented by the egg have been described by the most celebrated anatomists of our own and of other countries. I shall advert to the opinions which have been entertained by them as to the egg, only in so far as they relate to my present subject.

Eggs of the same bird differ from each other in shape. It has been asserted that the longer eggs contain males, the shorter ones females. To determine this, experiments were lately made by Dr. Autenreith, jun. of Tubingen. From his experiments it appears, " that the opinion so generally entertained by his countrymen, that cocks are contained in the longer eggs, and hens in the shorter and rounder ones, is without foundation; for the sex is indicated neither by the shape nor by the size, nor in any way by the external form of eggs."

A French naturalist, Bory de St. Vincent, speaks of a physician who had examined many thousand eggs, without being able to ascertain, from their external appearance, whether they contained cocks or hens.

Eggs of the same bird differ from each other in specific gravity. It has been conjectured, that the heavier eggs may contain males, the lighter ones females. But it is now generally known that eggs lose weight by being kept; and it has been shewn that this diminution arises from " the substitution of air for a portion of the water of the egg which escapes."

Eggs were found by Dr. Prout to differ from each other in the relative proportions of their saline principle. " I have sometimes thought," says

he, "these differences, as well as some other singular ones observed with respect to the earthy matters, might be connected with the sex of the future bird:" but he adds, "no proof of this could be obtained."

I have heard of a mode of discovering the sex of the chick in ovo, different from any which has been proposed by naturalists. The folliculus aëris, or air-cell, which is to furnish oxygen to the futue chick, is situated at the larger end of the egg. It has not in all eggs the same position at the larger end; and, in various districts of Scotland, it is believed that eggs having the air-cell situated *exactly* at the top of the larger end produce males, while those having the air-cell only *near* the top of the larger end produce females.

To ascertain this, I instituted a series of experiments. These experiments, as will be seen, go very far to prove that the opinion which has been stated is correct, and so to determine what naturalists of Germany, France, and England, have endeavoured in vain to discover.

Eggs were selected, all having the air-cell situated exactly on the apex of the larger end, and were hatched. In most instances, the birds were all males.

Eggs were selected, all having the air-cell situated, not on, but near to the apex of the larger end. In most instances, the birds were all females.

These experiments have been frequently repeated, and were conducted for me by persons residing in different parts of the country.

A few of the experiments were not quite so satisfactory as the others. Among a dozen of birds of one brood, two or three turned out to be of a different sex from the rest. I may remark, however, that it is sometimes rather difficult to determine whether the air-cell be exactly on the apex or not; and the anomaly may have originated in error arising from this cause.

Every person has observed the air-cell in the boiled egg upon removing the shell: in the recent egg, it may be perceived by holding the egg between the eye and a lighted candle. In general, even an unpractised observer may determine the position of the cell, whether it be at the axis or some little way from it, and so conjecture the sex of the future bird. Occasionally, however, as already remarked, it is rather difficult to decide whether the air-cell is or is not on the axis. Such eggs should not be used by those who may be induced to put the criterion to the test of experiment.

The fact ascertained by these experiments seems to deserve the attention of the economist and of the physiologist.

At present I would only remark, that the result militates against an opinion, which has been ably defended, in regard to the ova of quadrupeds, and which has been advanced, too, as to the eggs of birds,—that, previous to impregnation, they have no distinction of sex, but are so formed as to be equally fitted to become male or female; and that it is the process of impregnation which marks the distinction.

The air-cell exists in unfecundated eggs. In some of these it is situated at the top of the larger end; in others, near the top. From this it would appear that the male parent does not influence the sex of the embryo, but that the ovum has assumed its sex previous to impregnation.

ART. II.—*On the Detection of minute Quantities of Arsenic in mixed Fluids.* By ROBERT CHRISTISON, M.D. F.R.S. Professor of Medical Jurisprudence in the University of Edinburgh.—(From the Edinburgh Philosophical Journal.)

THE object of this paper is to estimate the value of the liquid tests for arsenic, when dissolved in mixed vegetable and animal fluids, and of the various processes which have been proposed for correcting the changes thus produced in the action of the tests; and, finally, to determine what mode of analysis is at the same time the simplest, and may be applied under all circumstances. The author has extended the researches of Orfila, and those on the modifications caused in the action of the tests, by the co-existence of animal and vegetable fluids; and shows, by the instances of broth, tea, coffee, porter, port wine, and milk, that, when the fluid is complicated or deeply coloured, and the arsenical solution of such moderate strength as may be usually looked for in medico-legal investigations, the four best liquid tests,—namely, lime-water, the ammoniacal sulphate of copper, the ammoniacal nitrate of silver, and sulphuretted hydrogen, are almost or absolutely useless. He next proves that no advantage is to be derived from the plans which have been proposed for restoring the true action of the tests, by destroying the colour of the fluids. These are two in number: the one advanced by Orfila, in 1821; the other by Mr. Phillips, in January last. The former chemist proposes to destroy the colours by chlorine; the latter, by digestion with animal charcoal. But Dr. Christison finds that, after the action of chlorine, the colour is seldom altogether or sufficiently destroyed; that the process does not take from the fluid the power it often possesses, of retaining the arsenical precipitate in solution; and that, in some decolorised fluids, containing no arsenic, some of the tests cause precipitates very similar to those produced in pure arsenical solutions. He likewise finds, that the process by digestion in charcoal is sufficient, because, if the solution is not very strong, the charcoal removes all, or nearly all, the arsenic, as well as the colouring matter; and, if the solution be strong, it does not always lose its property of retaining the arsenical precipitates dissolved. He then proceeds to examine the processes which have been recommended by Rose and Rapp for discovering arsenic, when intimately mingled with the animal textures, and which might also be applied to the residue by evaporation of mixed fluids, in which the common tests do not act characteristically. These processes it is unnecessary to mention. They are founded on the possibility of arsenic so combining with animal matters, as to resist the solvent power of boiling water. But Dr. Christison has found that, after careful digestion in water, no arsenic can be detected by either process; and, farther, that the process of Rapp is otherwise insufficient, when the quantity of arsenic is small, in which circumstance alone the ordinary means of analysis are inadequate.

In the last place, he describes the method which he has found easiest of execution, and most generally applicable, for detecting arsenic dissolved in mixed fluids, or mingled with such solids as are incapable of forming with it an insoluble compound. Minute directions are given,

for the sake of the inexperienced; but we shall notice only the essential parts, and the result of his experience with respect to the delicacy of the method. Having observed that the sulphuretted hydrogen, though it seldom acts characteristically on diluted solutions of arsenic in mixed fluids, nevertheless always throws it down of some colour or other, even when the proportion of poison does not exceed an 8000th part, he proposes to employ this test, with the view of procuring the arsenic in a convenient form for being subjected to the decisive process of reduction.

"The suspected matter, if solid, is to be divided into minute fragments, and boiled briskly in two or three successive portions of pure water. The fluid, whether originally such, or procured by digestion from the solid matter, is then to be subjected, in a deep, narrow glass, for half an hour, to a brisk stream of sulphuretted hydrogen gas. In many cases, however, it will be necessary to premise the two following preparatory steps, before transmitting the gas; and, as we can seldom know before-hand whether these steps are requisite or not, it may be right to resort to them in every case. The first precaution is to add a little acetic acid to the fluid. By so doing, the influence of any free alkali that may exist in it is counteracted; and several organic principles, which might impede the subsequent separation of the precipitate, are coagulated. The second precaution is to boil the fluid for a few minutes; by which means some matters are separated, that the acetic acid could not throw down entirely; and any carbonic acid existing in it is driven off. The presence of carbonic acid in considerable quantity, by impeding the solution of the sulphuretted hydrogen, prevents its action on the arsenic, if the proportion of arsenic be small. The fluid is then to be filtered."

"When the stream has been continued a sufficient length of time, there is either a precipitate formed, or the fluid acquires a yellowish milkiness, which passes to a distinct precipitate as soon as the excess of sulphuretted hydrogen is driven off by heat. It is always right to boil, before attempting to separate the matter thrown down; as the precipitate then becomes much more distinct, and falls to the bottom more readily. When the filtration is finished, and the filter has been gently compressed between several folds of bibulous paper, the precipitate is to be scraped off with a knife, and dried on a bit of smooth paper, at a temperature somewhat above 212°."

The most advisable mode of subjecting this to the test of reduction, is the following:—The best flux is the black flux, and the best instrument a glass tube, closed at one end, open at the other, about three inches long, and varying from a fourth to an eighth of an inch diameter, according to the bulk of the material, which should not fill above two-fourths of an inch of the tube. The best mode of applying heat is by the alcohol lamp, as recommended by Mr. Phillips.

"The true arsenical crust is known by the following physical character:—Its outer surface next the tube exactly resembles highly polished steel. Its inner surface (which is best seen by scratching the tube with a file at the lower margin of the crust, and snapping it across,) is precisely like the fracture of fine steel, if the quantity is considerable: if it is minute, it has a dull bluish-grey appearance, but, before a micro-

scope of four or five powers, appears brilliant and crystalline, like the fracture of steel. Occasionally, when very minute in quantity, it appears botryoidal, and not brilliant, even before the microscope: in that case, the part of the tube to which it is attached should be coarsely powdered, and heated anew in a tube of less diameter. It is scarcely possible for any one to mistake these characters, particularly if he has ever seen an arsenical crust before; but, to prevent all possibility of error, the analysis may be concluded with the following experiment:—The part of the tube to which the crust is attached, being broken into fragments, is to be left for some hours in a watch-glass, containing a dilute solution of the ammoniacal sulphate of copper, and covered to prevent evaporation. In four or five hours, the metallic crust will become grass-green; or, if very minute, it will be discoloured, and a brilliant grass-green crust formed on the surface of the liquor. The simple evaporation of the fluid will cause the formation of a crust on its surface, though no arsenic be immersed in it. But in that case its colour is pale blue."*

The author concludes by stating, that the evidence thus procured is quite unimpeachable; that the process is the most convenient yet proposed; that it is probably applicable to all cases without exception, as he has found it to answer with the most complicated fluids he could select,—namely, broth, tea with cream and sugar, coffee similarly made, porter, port wine, and milk; and that it is sufficiently delicate for all medico-legal purposes, as it will detect satisfactorily a quarter of a grain of arsenic dissolved in 8000 parts of any of the foregoing fluids.

ART. III.—*On Fumigation.* By M. FARADAY, F.R.S. Corresponding Member of the Academy of Sciences of Paris, Chemical Assistant of the Royal Institution, &c.—(Journal of Science, &c.)

I WAS called on, some months since, to direct and superintend the fumigation of the General Penitentiary at Millbank; in doing which, some precautions and arrangements suggested themselves, which I have thought might be usefully made known for the information of those who may have occasion to apply disinfecting agents to the purification of buildings, either large or small.

On examining a building to be fumigated, it is necessary to estimate the surface exposed to the infections vapours, as well as the capacity of the structure. When the air of a place is impregnated with infectious matter, the surface of the walls, &c. will absorb more or less of it in proportion as it is more or less extensive, as it approaches nearer to or is farther from the source of infection, and also in some degree according to its nature.

The general arrangement of the Penitentiary was favourable to its complete and perfect fumigation; for, though of great magnitude, yet its division into smaller parts, as galleries, towers, staircases, &c., most

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* If portions of the crust are simply exposed to the air, they soon acquire a greyish-black colour on the surface; a character also indicative of metallic arsenic. —EDITOR *of the Phil. Journal.)*

of which were glazed, and all of which could be closed by doors so as to separate them from each other, rendered the successive application of the means employed easy and convenient.

After deciding upon fumigation by chlorine, the next object was to ascertain the most favourable mode of applying it; and I was desirous, for many reasons, of obtaining a gradual and successive development of the disinfecting agent, rather than a sudden and short one. The latter mode, though it would have filled the building at once, and probably very effectually, yet would seriously have incommoded the operators, and would also soon have disappeared, in consequence of absorption by the limed walls, and from dissipation through apertures that would inevitably remain unclosed in different parts of the building: whilst the former mode, by continually supplying the disinfecting agent to the atmosphere of the place for a length of time, would enable it better to act on the bedding, clothing, and other articles left in the cells, and allow it also more perfectly to penetrate to every part of the building itself.

The materials used were those generally employed,—namely, common salt, oxide of mangenese in powder, and oil of vitriol. Upon making experiments with these substances, as furnished by the dealer for the fumigation, I found that a mixture of one part, by weight, of common salt and one part of the oxide of manganese, when acted upon by two parts of oil of vitriol, previously mixed with one part, by weight, of water, and left till cold, produced the best results. Such a mixture, made at temperatures of 60° Fahr., liberated no muriatic acid; but in a few minutes began to evolve chlorine, and continued to do so for four days. When examined on the fifth day, and urged by heat, so as to cause the liberation of all the chlorine that could be afforded by it, only a small proportion was obtained. Such a mixture may, therefore, be considered as having liberated its chlorine gradually but perfectly, without the application of any extraneous heat; and is, therefore, very proper for extensive fumigation.

The vessels in which the mixture is to be made should be flat, and such as, being economical, are least acted on by the chlorine or acid. Common red pans were used in the Penitentiary; for, many being required at once, better earthenware would have been too expensive. They held each about four quarts.

Preparatory to the fumigation, a quantity of the salt was turned out, the lumps broken down by a mallet until the whole was in powder, and then an equal weight of the oxide of manganese added, and the whole well mixed. The acid and water were mixed in a wooden tub, the water being put in first, then about half the acid added, stirring at the same time. When the heat produced had been dissipated, which happened in a few hours, the rest of the acid was added, stirring as before, and the whole left till cold. The men used measures in mixing the acid and water, and were told to take rather less of water than of acid; nine measures to ten being nearly the quantities required. Any slight departure from these proportions would be of no consequence. The pans were then charged, each with about three pounds and an eighth of the mixed salt and manganese, and distributed at proper intervals along the

galleries, &c.; care having been taken previously to close the doors and windows, and to stop with mats or rugs all apertures to which access could be had, especially key-holes, through which there was any draught. The diluted acid, being cold, was carried in cans or jugs, and measured out in the proportion of four pounds and a half to each pan, the mixture being well stirred with a stick, and left to itself. This was done without any inconvenience to the operator, except when the acid was applied too warm: there was abundant time to go from pan to pan, and to close the various galleries in succession. On entering a gallery a few minutes after it had been thus treated, the general diffusion of the chlorine in the atmosphere was sufficiently evident. In half an hour, it was often almost impossible to enter; and frequently, on looking along the gallery (150 feet in length), the yellow tint of the atmosphere could easily be perceived. Up to the fifth day, the odour of the chlorine could generally be observed in the building. After the sixth, the pans were removed, though sometimes with difficulty, to be emptied and used elsewhere; and the place fumigated had its windows and doors thrown open.

It was estimated that the charge of each pan would yield about one pound of chlorine, or five and a half cubical feet. The whole quantity of materials used was 700 pounds of common salt, 700 pounds of oxide of manganese, and 1400 pounds of oil of vitriol. The space requiring fumigation amounted to nearly 2,000,000 cubical feet; and the surface of the walls, floors, ceilings, &c. (exclusive of furniture, bedding, &c.) was about 1,200,000 square feet. This surface was principally stone and brick, most of which had been lime-washed. The space was divided into seventy-two galleries, of 150 feet each in length; and towers, passages, chapel, &c. equivalent to about thirteen galleries more. The number of cells, rooms, &c. was nearly 1200.

It was desirable, for many reasons, that the Penitentiary should be fumigated in the most unexceptionable manner; and the means employed were, therefore, applied to an extent probably far beyond that requisite to the destruction of any miasmata that might be within it. The proportion of chlorine evolved to the size and surface of the building may be considered, therefore, as sufficient for a case of the most excessive kind; and, though the limits are guessed at, rather than judged of by any well-founded rule, yet I should consider from one-half to one-fourth of the chlorine as quite sufficient for any of the usual cases where fumigation is required.

CRITICAL ANALYSIS

OF

ENGLISH AND FOREIGN LITERATURE

RELATIVE TO THE VARIOUS BRANCHES OF

Medical Science.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*Commentaries on Diseases of the Stomach and Bowels of Children.* By ROBLEY DUNGLISON, M.D. Lecturer on Midwifery and the Diseases of Women and Children; Member of the Royal Academy of Marseilles; of the Royal Society of Sciences, Arts, Belles Lettres, and Agriculture, of Nancy; of the Society of the Faculty of Physicians; the Pharmaceutical and Linnæan Societies of Paris; the Physico-Medical Society of Erlangen; the Academic Medical Society of Marseilles; Secretary for Foreign Correspondence to the Medical Society, and Member of the Hunterian Society of London; Consulting Accoucheur to the Eastern Dispensary, &c. &c. —8vo. pp. 201. Whittaker, London, 1824.

IT must be evident that, in the investigation of the diseases of infancy, there are great and peculiar difficulties to surmount. From the little patient no information can be gained, and so completely is the frail and tender body the sport of a thousand apparently unimportant circumstances, that it requires no ordinary professional acuteness to keep the eye fixed upon the grand features of disease, and not to be misled by symptoms which are only occasional and evanescent. We must not, however, approach the treatment of the diseases incidental to a very early age, with the depressing and erroneous conviction, that from practice and industry no benefit is to be derived; although we ought to be duly impressed with the difficulties to be contended with, that we may be induced to bring into action all our attention and consideration to overcome them. "To the experienced eye," says our author, "the deviations from health are readily recognised. The state of the skin, secretions, excretions, tongue, eye, breath, fatness, or leanness, gestures, cries, &c. &c. will sufficiently indicate the difference between the healthy and a diseased condition."

We readily admit the practical tact, that the frequent and attentive observation of diseases will impart; and we are indebted to M. JADELOT, physician to the Hôpital des Enfans trouvés,

for the communication of his experience. In the prefatory observations of our author, the opinions of M. Jadelot, which he has embodied under the term of "La Séméiologie physiognomonique," are briefly stated. They have been published in a work of M. DE SALLE, who estimates the proposed mode of discriminating the diseases of childhood so highly, that "he conceives their diseases will be recognised with such facility, that the possessor of the most mediocre talent may know and cure them as readily as he who is more highly gifted." It is, of course, yet to be determined whether the physiognomic investigation of a sick child will ever place the "most mediocre talent" and the more "highly gifted" upon a practical level. We hope it may, for we wish well to the multitude; but we fear it never will.

The following is a brief detail of the doctrine professed by M. Jadelot.—"Three principal traits are observable on the countenances of young children. These are nearly parallel, and uniformly proceed from the middle towards the lateral and inferior part of the face. The first commences at the greater angle of the eye, and is lost a little below the projection formed by the cheek-bone: this is called the *oculo-zygomatic.* The second begins at the upper part of the ala nasi, and embraces, in a semi-circle more or less perfect, the outer line of the orbicularis oris. It is not uncommon to observe, towards the middle of the cheek, and forming a species of tangent with the trait just described, another, which in certain faces constitutes the dimple of the cheeks. The alterations of these two traits are referable to similar affections: the one he terms *nasal,* the other *genal.* The last begins at the angle of the lips, and is lost on the lower portion of the face: this is called the *labial.* It seldom forms a deep line, being modified by the changes which the neighbouring parts undergo: the others, on the contrary, are more or less deeply marked, according as the diseases to which they are referable are more or less intense or chronic. The first-mentioned trait is the index of disorders of the cerebro-nervous system; the second, and its accessory, signalise those of the digestive passages, and of the abdominal viscera; the third is the concomitant of diseases of the heart and air-passages. Speaking generally, they are all the outward signs of lesions of the great splanchnic cavities. The oculo-zygomatic trait is strongly marked in all those diseases whose primary seat is in the brain and nerves. It is likewise observable whenever these organs actively participate in affections which were, in the first instance, foreign to them; but at such times a coincidence of some other facial line is found, which indicates the complication. Thus, for instance, it is said that the moment at which inflammation of the lungs, or catarrh, becomes converted into

neurosis, or at which a common cough becomes that of pertussis, is marked upon the child's countenance by the oculo-zygomatic trait. The same circumstance occurs when any disorder, primarily seated in the intestines, affects the brain; as, for example, when the presence of worms, or of chronic inflammation in the digestive tube, occasions epilepsy, convulsions, or hydrocephalus."

At the onset of all severe diseases, according to M. de Salle, the inspection of the child's countenance may serve as a useful guide to the physician in discovering the organ affected. Of the truth of this opinion there can be no doubt; and it is not in children alone that information may be thus obtained by an attentive observer, for in adults also it is of the utmost importance in assisting our diagnosis. No man can have watched a patient labouring under inflammatory affections of the abdomen, without being struck by the forcible and peculiar character impressed upon the countenance: "*le cri des organes qui souffrent*," as Broussais has fancifully styled it. The subject is worthy of the most deliberate investigation, and we think promises a rich harvest of practical information; but we forbear from further observation upon it on the present occasion, as a work of M. Jadelot's, on "Séméiologie Physiognomonique," is on the eve of appearing, which we shall not allow to escape without due attention. We perfectly agree with our author, that plates should be given to elucidate his different positions. To fix upon the mind, by verbal description, an impressive sketch of various changes of features, is as impossible as it is to convey a clear notion of cutaneous diseases without graphic illustrations.

We now enter upon the first chapter of the "Commentaries" of Dr. Dunglison, containing the consideration of *Intestinal Worms.* "At one period of medical history, there was scarcely a disease, the origin of which was not referred to the influence of animalculæ in some form; and even at the present day, on the continent, invermination is considered to have a much more extensive agency in the production of disease, than is allowed to it on this side the Channel, and more than it appears to be fairly entitled to." There is one species of animal, however, which has of late years been thought, by some among us, to have an important influence in the production of several diseases,—viz. the hydatid. "To this insect," says our author, "pulmonary and other tubercles, the various tumors affecting the corporeal fabric, have been ascribed; but no clear evidence has, as yet, been adduced to render the notion indisputable." The work of Dr. Baron, on Tuberculated Accretions, is not mentioned by our author, although that gentleman supports his opinion of the

frequent conversion of hydatids into tubercular masses by much solid reasoning, and numerous interesting facts.

Dr. Dunglison considers the best systems for the classification of the worms which infest the human body, to be those of RUDOLPHI and BREMSER, from whose united labours FRANK has taken his arrangement. A detailed description of the characteristic structure of each species of worm is given. "With respect to the mode in which worms are generated in the human body, various opinions have been entertained. The chief controversialists may, however, be divided into two great classes,—viz. those who believe in equivocal generation, and those who consider that the germs must be always received from without." The symptoms which indicate the presence of worms in the human body, are very obscure. "It has, indeed, by some been affirmed that they are perfectly innocuous; whilst others have, on the contrary, ascribed almost all the diseases to which mankind is subjected to this agency. Both these sentiments are erroneous: there cannot be a doubt but that the health is occasionally very much injured by them: whilst they are not entitled to such extensive agency in the causation of disease, as has been by many imagined. Some years ago, Frank was requested to see a prince who had been attacked with epilepsy: his physician assured him that he could make him void, at pleasure, thousands of filiform worms; but, as he was neither able to define the genus nor species of these worms, Frank requested to witness the phenomenon. The physician administered a dose of castor-oil, which produced many stools, in which were thousands of whitish filaments, similar to small eels; but, on an attentive examination of these pretended worms, they were found to consist entirely of the castor-oil in a state of coagulation."

The general symptoms which denote, or are believed to denote, the presence of worms, are well known; yet it may not be useless to give a rapid sketch of the phenomena, described by the continental writers as occurring in an exquisite case of this kind, for which M. ALIBERT has proposed the appropriate name of *helminthiasie*. The face is swelled, pale, and sometimes livid; the integuments under the lower eye-lid become of a leaden hue; there is itching or tension of the nose, occasionally with epistaxis; during sleep, the saliva runs from the mouth; the breath is offensive; there is grinding of the teeth, particularly at night; aphonica. Squinting or other distortion of the eyes, with dilated or even immobile pupil; sometimes with amaurosis. Unpleasant dreams; morosencss and obstinacy of temper; lastly, chorea, risus sardonicus, vertigo, delirium, and stupor. All these symptoms are more or less referable to the head. With regard to the chest, we have frequent dry cough; anxiety at the præcordia; occasional stitches, resembling pleu-

risy; hiccough, and other convulsive affections of the diaphragm. The sensation of something creeping from the stomach along the œsophagus, is occasionally felt; and, more rarely, worms presenting themselves at the nose or mouth. Frank has even known them produce suffocation, by falling into the larynx.

In the abdomen, we find, with regard to the stomach, that the appetite is sometimes insatiable, although it is attended by progressive and rapid emaciation; while at other times nausea, retching, and cardialgia, prevail. With respect to the bowels, a sense of cold, gnawing, or tearing; borborigmi; tympanitic swelling; eructations; tormina; tenesmus, and discharge of mucus from the rectum, and occasionally of the debris of rotten worms.

The question whether worms ever perforate the intestines, is one of some interest; and Frank states, in reply, that, in the course of fifty-four years' practice, he only met with one such example, out of several thousand bodies which he examined. The cases of this kind, related by various writers, are therefore probably to be attributed to accidental ulceration of the parts, through which the worms have made their escape; an opinion in which both Rudolphi and Bremser concur.

Upon the whole, we are compelled to acknowledge, that, after all the labour which has been expended to determine the symptoms which indicate the presence of worms, the only true pathognomic sign is their expulsion. We possess no satisfactory information of the symptoms which characterise the presence of any particular species.

Frank has paid great attention to verminous affections; and Dr. Dunglison gives the following English version of his statement:

"In enumerating the symptoms of verminous affections, I have pointed out their prognosis. It has been shown that the symptoms produced by the presence of worms, are at one time trivial, at another severe; and that, in some cases, from their occasioning no inconvenience, there is no evidence of their existence. Intestinal worms are more exposed to the action of remedies, adapted for their destruction, than those which fix their residence in the parenchyma of other viscera. They find themselves, however, protected by the mucus which lines the alimentary canal, by the fecal matters with which they are enveloped, and by the folds of the mucous membrane in which they conceal themselves. At other times, as is frequently observed in cases of tænia, the head is firmly implanted in the tissue of the intestines. It is consequently not astonishing that, in a considerable number of cases, they are but little sensible to the action of anthelmintics, and obstinately resist these remedies; or that the articulated worms should suffer only the loss of some of their rings, which is speedily repaired. Occasionally, they seem to sport with the physician: after having braved his efforts,

they make their exit spontaneously; but commonly leave, in the intestines, germs which perpetuate their species, and compensate for their voluntary disappearance.

"All the species of intestinal worms do not offer the same resistance to the means employed by the physician: in general, the *ascarides lumbricoides* yield readily; the *oxyures vermiculares* are more difficult of expulsion; the *tænia solium* is still more obstinate; whilst the *bothriocephalus latus (tænia lata)* is almost invincible, and requires a treatment which sometimes endangers the life of the individual affected with it. Induced by these observations, or led away by a spirit of novelty, some authors have confirmed the old proverb, '*nihil est tam absurdum quod non docuerit philosophus,*' by maintaining that worms are intended for absorbing the superfluous mucus of the intestines, to increase their peristaltic action, by the irritation which their presence occasions in the structure of these organs; and, consequently, that they are useful to man, instead of being injurious to his health. It must be confessed that the predisposent causes of worms exercise the greatest influence in the production of diseases which are attributed to those animals; that an infinite number of persons carry worms in their intestines during the whole course of a long life, without being much incommoded by them; that physicians sometimes gratuitously conceive, to the prejudice of the patient, the existence of these animalculæ; and that, in several cases, (more commonly, indeed, than is imagined,) where they really do exist, they are not the cause of the disease which is ascribed to them. The symptoms, however, induced by worms themselves, prove that the morbid affections attributed to them are not always chimerical. In children, women, and men of a delicate constitution, worn down by enervating causes, labouring under different severe diseases,—as scarlatina, variola, and measles,—worms frequently exert great ravages, and even occasion death. Nor are they less to be feared when they attack organs essential to life. The *ascarides lumbricoides,* which are so common, produce more unpleasant symptoms when they ascend into the stomach, than when they remain in the intestines. When worms creep out spontaneously by the mouth or anus, at the end of fevers, they are doubtless driven away by the morbid heat, or by the hunger which they feel, owing to the patient's taking no food. They are also observed to creep out at the approach of death, during the time of the agony, and when the patient has rendered his last sigh. Hippocrates regarded the exit of worms at the termination of a disease, as a favourable presage:—'Lumbricos teretes, morbo judicium subeunte, una cum excrementis prodire, utile erit." This occurrence, however, I have frequently witnessed, without either a favourable termination having followed, or any change having been induced in the progress of the disease." (P. 45, 48.)

The grand predisponent cause of worms, is a want of due tone and vigour in the system, and in the digestive organs more especially; and, in the treatment of verminous affections, therefore, the principal attention must be directed to the removal of these. "Without this important desideratum, we may destroy

by anthelmintics one set of these parasites, but others will continue to be produced. The subject of verminous disease should, therefore, respire a pure air, take proper exercise, avoid the use of crude, indigestible nourishment; and, in short, adopt every means of improving the tone of the system." A decisive vermifuge process is yet a desideratum in medical practice. "Worms in the intestinal canal are so involved in mucus, that remedies, which readily destroy them out of the body, are considerably mitigated in their action on those inhabiting the human frame; whilst some of those that are recommended have a tendency, at the same time, to weaken the tone of the stomach and bowels, and thus, by augmenting the predisponent cause, to increase the disease." Violent drastics are strongly deprecated, although a brisk cathartic is regarded as a valuable agent. Only two mechanical anthelmintics are exhibited at the present day, —filings of tin and the cowhage; and the testimonies in favour of both are numerous. Most of the true anthelmintics which have been recommended, are almost, if not wholly, inert. Oil of turpentine, simply or combined, and the *semina santonicæ*, or wormseed, are, in the opinion of Dr. Dunglison, the only two medicines of this class it is necessary to retain.

The following is the plan adopted by Bremser, being similar to that employed by Frank, in the early stages of the disease:—

"He commences with the following electuary:

℞. Seminum Cinæ (Santonicæ) aut Tanaceti vulgaris, ruditer contusorum, ℥ss.
Pulveris radicis Valerianæ sylvestris, ʒij.
——— Jalapæ, ʒss. vel ℈ij.
Potassæ Sulphatis, ʒiss. vel ʒij.
Oxymellis Scillæ, q. s. ut fiat Electuarium.

The patient is recommended to take two tea-spoonfuls of this remedy twice or thrice a-day, until the whole is consumed.

"When this is finished, he gives, morning and evening, two dessert-spoonfuls of the empyreumatic oil, and directs the mouth to be rinsed afterwards with a little water. Should the oil act too powerfully on the nervous system, or on the bladder, the dose must be diminished. According to this plan, about two ounces and a half will be taken in the space of ten or twelve days. The following purgative is then exhibited:

℞. Pulver. radicis Jalapæ, ℈j.
Folior. Sennæ, ʒss.
Potassæ Sulphatis, ʒj. Misce.

This powder is directed to be taken every hour, until full evacuations are produced; after which the oil must be again resumed, and persisted in until four, five, six, and even eight, ounces shall have been taken, according to the difficulty which may be experienced in expelling the tænia, or other entozoa." (P. 74, 75.)

Among the external applications used for anthelmintic purposes, the only one remarkable for its novelty,—we can scarcely say, for its elegance or practical utility,—is assafœtida dissolved in gastric juice! This wise recommendation comes from M. Cloquet: how a supply of gastric juice is to be obtained, he has not thought proper to inform us.

Let it, however, always be borne in mind, that we depend upon a tonic mode of treatment for the annihilation of the predisposition to worms.

We do not feel ourselves called upon to occupy the attention of our readers, by a lengthened detail of the contents of the remaining chapters of the volume. To us they appear somewhat uninteresting, although we are not prepared to deny the accuracy of many facts which are gravely stated: for example, —that "the retention of the meconium will produce disturbance in the infant; that a few grains of rhubarb, or a teaspoonful of castor-oil, may be given to act upon the bowels, if necessary; and that nurses sometimes apply a piece of butter, mixed with soft sugar." These are truths, which may not altogether have escaped the notice of our readers.

In the chapter on *Constipation*, we find that, according to Tissot, spasm of the sphincter ani muscle is not unfrequently the cause of retention of the meconium; and the hint is, at least, worth attending to. In such cases, he regards purgatives as injurious, and advises the use of emollient fomentations, the warm bath, &c. When the constipation is rather obstinate, our author recommends the introduction of a suppository into the rectum, formed of yellow soap: this he thinks equally efficacious, and more manageable than clysters. Upon the whole, we regard Dr. Dunglison as too partial to purgatives of the drastic kind, particularly scammony, calomel, and aloes: of the latter he says—

"In some very obstinate cases, I have found the administration of aloes in powder succeed in emptying the intestines, where all the common remedies had been ineffectually employed: it is, indeed, in such cases only that its exhibition, to the extent which I have used it, can be justified.

"I was first induced to employ this medicine so largely, from the very high eulogums I had heard pronounced upon it by Dr. Hamilton, the present celebrated Professor of Midwifery in the University of Edinburgh, to whom the idea of administering it was suggested by observing, in a laboratory where he had been placed by his father, for the purpose of being instructed in pharmacy, that the syrup of buckthorn (so called), which they were in the habit of vending to mothers of families to be given to their children, was usually formed extemporaneously of aloes dissolved in treacle; and, upon making inquiries of those who had purchased it, he found that no bad effects had resulted

from its administration. He consequently formed the determination of trying it in his own practice; when he found it to be not only a successful agent, when other means had failed, but also that it was rarely rejected by the stomach, acted mildly, was perfectly safe, and but seldom objected to by young infants. To older children, however, in whom the taste generally becomes exquisitely sensible, the last observation does not generally apply. In all the encomiums passed upon the use of aloes as a purgative, I can cordially concur. In some cases of constipation, and in others of diarrhœa, apparently occasioned by the retention of feculent matter in the upper portion of the intestines, I have seen its administration productive of the most happy effects. It has been but rarely objected to by children; and its use has never, to my knowledge, been attended with griping or any other unpleasant symptom." (P. 85—87.)

We confess, however, that we are much disposed to give the preference to the milder cathartics in young children; such, for example, as the following prescription, which Jadelot asserts "*ne manque jamais son effet.*"

℞. Fol. Sennæ, ʒiij.
Sodæ Sulphatis, ʒij.
Mannæ, ℥j.
Aquæ, ℥iv.

Sennam in aquâ bulliente per horæ quadrantem infunde, tum cola et adde Salem et Mannam."

A tea-spoonful of this is to be administered occasionally, until the bowels are opened.

The chapter on *Acidity, Flatulence, and Colic,* affords nothing to extract, either from the author's own opinions, or those of the numerous writers to whom he refers. That those evils proceed from errors of diet and irregularities of the bowels, and are to be remedied by change of the former and attention to the latter, can scarcely be regarded as information of absolute novelty; any more than the recommendation of M. Leroy, to half-roast a child's belly before a flaming fire, in order to cure it of the gripes, can be looked upon as an injunction of absolute wisdom. According to this practitioner, it must be "un feu qui fournit une belle flamme;" and, to make it more decided that he trusts not to the heat alone, he adds, "une chaleur portée au même degré, mais sans l'influence de la lumière ne produit pas cet effet vivifiant."

The discussion on *Diarrhœa* is very lengthy, and the more interesting part relates to that form of disease consisting in softening, or complete ulceration, of portions of the intestinal canal, which constitutes the subject of the interesting paper by Mr. North, in the preceding part of this Number. Dr. Dunglison furnishes us with no new materials, and the chapter is almost entirely occupied by copious quotations from the work of M. Cruveilhier, and the papers of M. Andral, already

referred to,—both of which have been analysed in former Numbers of our Journal. We cannot, however, refrain from expressing our astonishment that the author, compiling as he has done from so many foreign writers, should have entirely omitted, even to mention, the excellent paper of Dr. GAIRDNER, in the Medico-Chirurgical Transactions of Edinburgh, in which there is more information than in all the others put together. We would not have noticed this circumstance,—originating, we trust, in accidental omission,—had we not observed that some of our brethren have an extraordinary predilection for every thing that is foreign: as if French doctrines, like French wine, were more pure and digestible than those of English manufacture.

The opinions of Dr. Dunglison and various practical writers, with regard to a very formidable disease, are detailed in the following quotation:

"For that extremely dangerous variety of the disease to which the term *watery gripes* has been applied, it is difficult to lay down a plan of treatment adapted to all cases. Whilst many practitioners strongly inculcate the necessity of repeated purging, on a presumption of the cause being referable to the presence of irritating matter in some portion of the intestinal tube; others, equally exclusive, imagine it to be owing to an inflammatory condition of the mucous tunic, and to require the use of sedative remedies only. Were the causes properly appreciated, both classes of practitioners would probably be found occasionally right, and both occasionally wrong. I have sometimes witnessed cases in which there has been every reason for supposing that some accumulation had taken place in the cæcum, or small intestines; and where the increased peristaltic action, which had been the consequence, had produced irritation of the mucous coat, and augmented secretion of fluid by the exhalants. In such instances, of course, the affection could not be annihilated until after the removal of the offending matter. In other cases, purgatives have appeared to afford no relief, and the disease has rapidly yielded to the use of anodynes and the testacea. Opiates should, however, be administered with the greatest caution. I have myself lately witnessed two cases, in one of which a drachm of the syrup of poppies, and in another a powder containing a quarter of a grain of opium, proved fatal to young infants; and a case is referred to by the late Dr. Clarke, in which forty drops of Dalby's Carminative was attended with equally disastrous results.

"The opinions of those who have considered the disease to originate in retained fæces, have seemed to be confirmed by the circumstance of no solid matter being perceptible in the motions after its setting-in. This is, however, no proof whatever of the correctness of their discrimination. In common cases of diarrhœa, whilst the secretion of fluid is moderate, solid feculent matter may be perceptible; but, where the stools are frequent and the secretions immoderate, although in the aggregate the quantity evacuated may be equally great, it becomes so broken down and divided, as to present but little traces of it; so that

its apparent paucity in any single evacuation, under such circumstances, ought rather, perhaps, to be considered as a gauge of the extent of the disease, than as a proof of retention. If this idea be correct, and it has appeared to me to have been borne out by observation, the practitioner might go on exhibiting purgatives, under the delusive hope of inducing a discharge of retained fæces, until he occasioned a degree of inflammation of the mucous membrane, or an increase of the colliquative discharge, from the effects of which the patient might not subsequently recover. Many cases, I have but little hesitation in asserting, have owed their fatal termination to this practice. But it may be replied, that, under such treatment, the feculent matter has re-appeared, and the patient's health immediately begun to be restored. Such reappearance, however, is no positive evidence of fecal retention having existed in those cases where the stools are extremely frequent, and dependent upon the causes which have been just exposed: the removal of such causes, howsoever induced, would give occasion to solid evacuations. But, whether the disease originates in the retention of fæces, or in increased action of the vessels of the inner membrane, the return of more consistent dejections is always a favourable indication.

"The great difficulty in the treatment of watery gripes, is to properly discriminate the cases in which purgatives are to be advised, from those in which they should be carefully abstained from. In general, where the child is suffering from copious watery stools, without there being much pyrexia, or pain of the abdomen on pressure, present, a dose of some brisk cathartic,—as calomel joined with rhubarb, scammony, or jalap, may be usefully administered; but, should symptoms of abdominal inflammation be concomitant, the more gentle laxatives, as cold-drawn castor-oil, rhubarb and magnesia, or syrup of senna, should be preferred, merely for the purpose of emptying the upper portions of the intestinal tube of any irritating matter which may be present. To fulfil a similar indication as regards the super-diaphragmatic portion of the digestive canal, an ipecacuanha emetic may be advisable. If, under this treatment, the stools become improved in appearance, and less frequent, the laxatives may be gradually decreased until they are finally abandoned altogether.

"Should the symptoms not yield to the aperients, the frequency of the stools being much increased without their character being altered, whilst the powers are rapidly sinking, the warm bath, fomentations, and anodyne friction, may be occasionally used, and an opiate clyster be given repeatedly during the day, in regulated doses; whilst the pulvis cretæ compositus, or any testaceous preparation, may be administered internally.

"By these means, even although the stools are unnatural, the inordinate secretion may be arrested; and gentle laxatives may subsequently carry off the offending matters." (P. 140—145.)

There remain five chapters: they treat of *Vomiting* and *Cholera*, of *Aphthæ*, of *Inflammation of the Stomach and Intestines*, and of *Intussusception*. We have read them.

In reviewing the general contents of the volume before us,

we think two circumstances are evident:—1st, that the author has read many books,—that he has quoted frequently, freely, and fairly,—for he has always confessed his authorities; 2d, that on these quotations depends whatever value his work may possess, because, from his own personal observation, he has little or nothing to impart on the subjects of which he treats. Guided, therefore, by our invariable rule of giving, according to the best of our judgment, a fair account of the works which come before us, we would suggest that the present title-page should be cancelled, and the volume be called "Extracts from various Authors on the Diseases of the Stomach and Bowels of Children, collected and arranged by R. Dunglison, &c. &c."

ART. II.—*Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland.* Vol. IV. —8vo. pp. 452. Dublin, 1824.

WE have already given, under the head of COLLECTANEA, several of the most interesting cases contained in the volume before us; and it is now our intention to present our readers with an analysis of those papers not hitherto noticed, and which, from their length, are not adapted to that department of our Journal. This volume, we are happy to say, is at least equal, in point of interest, to those which have preceded it, and affords a very satisfactory proof of the zeal and industry with which the different branches of the profession are cultivated in the sister kingdom; for, though professing to be the Transactions of the Fellows and Licentiates of the College of Physicians, the work includes, in fact, many observations and papers on subjects purely surgical, and is a good evidence of the kindly feeling which pervades the different branches of the profession in that country.

Without further preface, we proceed to the first article, which is a *case of Pregnancy occurring during the existence of a Tumor in the Womb*, and which tumor was removed after abortion had taken place. The facts of this case were shortly these:—A lady, twenty-five years of age, who lay-in of her first child in April, 1819, and was, for upwards of ten months afterwards, employed in an anxious attendance upon her husband during a protracted illness at Paris, returned with him to Ireland in August, 1820; and, on the 2d of September, consulted the author of the paper (Dr. BEATTY), in consequence of a swelling at the lower part of the abdomen, accompanied with a considerable pain on pressure. This swelling came on in May, but constantly disappeared during the menstrual periods, which were regular. On the 23d of the same month, the tumor was very evident, situated above the pubis; and on the 28th, Dr. Clarke was called in.

The os tincæ was found dilated to the size of a dollar, and in its opening was a large dense substance, of a regular smooth surface, connected closely with the internal surface of the uterus. The tumor extended up to near the umbilicus, and was so irregular, externally, as to have the appearance of two unequal tumors. It was judged right to attempt gradually to detach the tumor, and, for several days, regularly, Dr. B. introduced his finger, and endeavoured gently to separate the connexion between it and the uterus. In a few days, he succeeded to the extent of the full length of a finger, without giving pain, except at the posterior part, where he was stopped by what appeared to be a ligamentous attachment; the other parts giving way without pain or hemorrhage.

On the 11th of October, Dr. Clarke again saw the patient; but there was no perceptible difference, excepting the great increase of the tumor, which had reached far above the umbilicus, and was much more prominent in front.

Things remained in this state until the 11th of November, when the patient, whilst riding in her carriage, was seized with a sudden discharge of blood from the vagina. Dr. Beatty saw her in the evening, and found the parts within exactly in the same situation as in the previous month. There was some pain. She had lost her appetite, was thirsty, and felt generally unwell. At two o'clock the next morning, she miscarried: the embryo was entire, the membranes not being ruptured, and the placenta attached to them. The fœtus was not three months old; so that conception must have taken place about the middle of August, three months after she perceived what she called the lump in the womb.

Mr. Crampton was now consulted as to the removal of the tumor, but he dissuaded them from any active interference; and it appears that this mass was expelled, slowly and regularly, by the mere efforts of the uterus, so that, on the 17th, it was found at the os externum, where it remained partially attached, and was finally removed at twelve o'clock, in the presence of Drs. Evory and Marsh, and Mr. Crampton. No accident followed; the lady soon recovered, and in February, 1822, produced a healthy child. The tumor, which weighed nearly four pounds, had very much the appearance and texture of the placena, but was more dense, and very vascular; the external surface was covered with a smooth membrane, and had the appearance of a highly vascular, gravid uterus.

The second paper we shall pass over: it simply records the *expulsion of a Biliary Calculus*, in a patient suffering under great derangement of the biliary organs, and which eventually caused death. There is nothing remarkable in the history of this case,

excepting that the presence of this calculus was not so forcibly denoted by the symptoms as is sometimes the case: its size was, however, considerable, being one inch and a quarter in its larger diameter, and three-quarters of an inch in its shorter. Externally it was smooth, and of an oval shape.

The next communication which arrests our attention, is from the pen of "an experienced Physician," and relates to a species of *premature labour*, to which women are occasionally liable. We shall here confine ourselves to the facts of these cases, as related and confirmed by Dr. BEATTY, leaving out entirely the speculative opinions of the writer, as to the acrimony of the blood, the existence of a venereal taint on the side either of the father or mother, although there are no symptoms of that disease to be detected, &c. &c.; speculations which, we are quite sure, can lead to no practical conclusion; and, therefore, we proceed to state the case, which is this:

"A lady, apparently healthy, conceives and carries her child in the usual way, till, about the seventh or eighth month of pregnancy, she by degrees ceases to perceive the motions of her child; and, in about ten days or a fortnight after this event, she falls in labour, and a fœtus, evidently dead for some time, is expelled. This often happens three, four, five, or six times in succession, or perhaps more frequently, to the same patient, and about the same period of pregnancy. The first time such accident happens, there has generally been some cause to weaken the patient, during gestation; but, in the subsequent instances, it rarely happens that any adequate cause can be assigned. Women, who have borne many healthy children, have sometimes fallen into this pernicious habit, and continued it for a length of time, and afterwards had living children. A memorable instance of this kind occurred in the lady of a viceroy in Ireland, about thirty years ago. In such cases, it is evident that miscarriage happens in consequence of the fœtus dying in utero." (P. 28.)

The solution of this difficulty is given by Dr. Beatty, who says, that, as early as the year 1789, his attention was directed to the subject, in consequence of a case he met with when resident assistant at the Dublin Lying-in Hospital; and he relates several cases in which women had been delivered of putrid children at the end of the eighth month; and, in all those cases, he was led to suspect a venereal taint to be the cause. His views were confirmed by the result of a mercurial treatment, to which these patients were subjected; and he adduces five strongly-marked cases, as confirming his view of the subject.

We must be excused from entering at greater length into the discussion which this communication is calculated to produce. We scarcely know what to say to Dr. Beatty's explanation of this affection, since, if we are to believe that a husband's having

had the venereal disease some time before his marriage, although he is apparently well at the time, is sufficient to produce this accident to his offspring, we scarcely know who would be safe.

Still more extraordinary is the case of the lady of the cavalry officer, who was delivered of a putrid child in the eighth month of her pregnancy. In this instance the husband had contracted, whilst on the continent, a slight venereal complaint, of which the surgeon considered him cured before his wife joined him in France; and the author admits, that he could not detect any venereal symptom in the parents.

All we can say is, that Dr. Beatty's practice appears to have been eminently successful, though we do not quite understand his theoretical views; a matter, we are willing to confess, comparatively of little consequence.

At page 91, we find the history of *a case of fatal Result from Mercurial Ointment*, related by Dr. Crampton, accompanied with remarks upon that case by the same gentleman. This paper is worthy of notice, in several points of view. An attentive perusal does not, in our minds, fairly connect the death of this man with the employment of only three drachms of mercurial ointment; nor is the dissection such as to clear up our doubts. We also lament that the previous history of the case is not detailed at sufficient length to enable us to form an accurate judgment of the whole case. The following extract is all the information given to us of the man's previous state of health: the time he had laboured under these symptoms is not even hinted at.

"Joseph Jones, ætatis twenty, an engraver, naturally of a robust habit, was admitted into the Whitworth Chronic Hospital, on the 7th of November, 1821, with symptoms of ascites and general anasarca,—the eye-lids even being distended with fluid. Cathartic and diuretic medicines were exhibited under the direction of my esteemed colleague, Dr. Bryan, in one of whose wards he was placed. The expected relief not being obtained, on the 30th of November he was ordered the ung. hydr. ʒss. bis die, to be rubbed on the abdomen. After having used three drachms, his mouth became sore: the ointment was, of course, discontinued."

On the 8th of December, the parotid and submaxillary glands were much swollen. Leeches were applied; and, on the 10th, blood was taken from the arm. On the 12th, fifteen more leeches were applied to the tumid parts; but, on the 14th, as his breathing became oppressed to an alarming degree, he was removed to a large empty ward, which affording only temporary relief, he was put into a slipper-bath in the evening, and again

bled to the amount of fifteen ounces. On the two following days, blood was discharged with the saliva. The bowels were kept open by a laxative draught; though he appeared better, on the same night the discharge from the mouth ceased, the swelling of the face subsided, and he died with every appearance of apoplexy.

Dissection took place ten hours after death; but there was no effusion in the brain. The liver was diseased; the gall-bladder half full of green bile; the mucous membrane of the small intestines, particularly of the ileum, was of a bluish green colour, ulcerated in many parts, or rather appearing as if corroded by some active chemical substance. This condition was not observed in the large intestines, but green-coloured fæces adhered to the inner surface of the intestinal canal.

Now, we cannot here be satisfied that the appearances found are at all, or in any great degree, attributable to the three drachms of mercurial ointment; and we are quite sure that the treatment adopted, under the impression that mercury was acting deleteriously upon the system, was calculated rather to render it more active than to allay it. The bleeding, warm baths, &c. were, we conceive, not indicated; and the more especially as the mercury had produced its ordinary and legitimate effects upon the salivary glands; in which cases, we have seldom found the dangerous results, as described by Mr. Pearson and others, to take place: sudden death by what has been called mercurial erethism generally occurring where that medicine has been long accumulating in the habit, without any of the more usually marked symptoms of its action.

Our author's reasoning upon the appearance of the intestines, appear to us to be overstrained. Such ulcerations in a diseased condition of the liver, which may have existed, for aught we know to the contrary, for an indefinite period; the quantity of green bile in the gall-bladder, connected with the green-coloured fæces in the intestinal canal, are all explainable, we conceive, without any reference to the small quantity of mercury employed. Our limits will not permit us to pursue this subject further; but we confess that we perceive no analogy between the case recorded above, and that to which the author alludes in the subsequent portion of his paper; and we are always inclined to discourage general conclusions deduced from a solitary fact.

Passing over a case of *misplaced Viscera*, which affords no particular point of interest, we find, at page 131, the detail of *three cases of Irritable Bladder*, cured by an infusion of the buchu leaves. The disease which Dr. M'Dowell describes, is one by no means unfrequent, and very distressing. The second case affords an excellent specimen of the symptoms usually

accompanying it, and, being compressed into a short compass, we feel disposed to transcribe it.

"Philip Dwyer, aged sixty-seven years, sallow complexion, emaciated; ill for three years. Complains of severe pain in the pubic region, particularly before he passes water. Great irritability of bladder, passing water in small quantities every quarter or half hour during the night: during the day, can occasionally retain it for two hours. Less irritability when using much walking exercise: when sitting, is affected with a stinging or scalding sensation in the prostatic region. Urine generally white or muddy. Frequently passes a large quantity of a slimy, pale yellow-coloured mucus, voided with great difficulty, and soon putrefying: is much relieved by its expulsion from the bladder. Is greatly debilitated, and has lost much weight. Tongue loaded with yellowish mucus; thirst; no appetite; bowels generally constipated, stools black. No enlargement of the prostate could be felt.

"*Previous history.*—Never had gonorrhœa; has been a temperate liver. The disease commenced three years ago, first with slowness and difficulty in passing water, which was followed by frequent micturition. He attended the Talbot Dispensary for five months, and left town apparently cured. He relapsed, however, in a month, and returned to the Dispensary, May 13th, 1822. He was ordered a pint of the aq. calcis daily, twenty drops of the muriated tincture of iron three times daily, an opium suppository (three grains) every night, and purgative pills to be taken occasionally." (P. 135, 136.)

This man commenced taking the infusion of buchu leaves on the 29th May, and was well by the end of July. It is scarcely necessary to say, that, when these symptoms of irritable bladder are dependent upon diseased prostate or the presence of a calculus, the above means cannot be supposed to have any influence over them.

If we omit to notice Dr. Evanson's cases of *Hydrocephalic Fever*, which occur next in order, it is not that we consider them as deficient in interest; but the very nature of our analysis obliges us to pause principally where any thing novel, either in theory or practice, strikes us as commanding attention, or deserving consideration. And, for the same reason, we shall not extract any portion of Dr. Teeling's case of *Suppression of Urine*, which, like all the cases of the kind which have occurred to us, either in books or in practice, was followed by death.

A letter on *Variola after Vaccination* next presents itself to our notice, from Dr. Clarke to Dr. Brooke, in which the Doctor seems to wish it to be understood, that the numerous cases of eruptive disease after vaccination are not cases of variola; and he refers us to Dr. Cullen's definition of the latter disease, the distinctive character of which is, that "*spatio octo*

diarum in *suppurationem* abeunt;" and he appears to think that nothing should be admitted as small-pox that will not stand the test of this definition. For our own parts, we think it much better to admit at once fairly that variola after vaccination is a common occurrence; but that the absence of secondary fever, &c. have so far altered and modified its features, as to disarm it of its malignancy: and, really, to add an argument in addition in favour of vaccination, we are extremely gratified to perceive, by the return annexed to this letter, that the number of persons vaccinated in 1822 greatly exceeded that of the previous year, and that upwards of 3200 packets of lymph had been distributed to practitioners in general during that year.

Dr. PICKEL's case of *Insects in the Stomach*, and Mr. ADAM's cases of *Tumors in the Neck*, have been detailed so much at length, that we do not deem it necessary to dwell upon them, as they are probably familiar to most of our readers.

Dr. FRANCIS BARKER has favoured us with an account of his experience of the *Sulphate of Quinine*, as a remedy in *Intermittent Fever;* and, as this medicine is deservedly rising in public estimation, we cannot do better than give the author's account of its effects in thirty cases, in which he employed it.

"On inspection of the preceding table, it becomes evident that the sulphate of quina is an effectual remedy for intermittent fever, and succeeds in cases which resist the bark. Of thirty persons treated with this remedy, not one has resisted its use, and in a majority of the cases the disease ceased within a day or two after the first dose was taken. Very small doses were employed, as a part of the object was to determine the smallest quantity capable of effecting a cure; and, although this has not been ascertained with precision, yet it was proved that a grain, or less, taken three or four times a-day, was as efficacious as larger doses. In one of Dr. Morgan's cases, half a grain three times a-day suspended the paroxysm for eight days. In no case did it disagree with the stomach, an effect often attendant on the use of Peruvian bark, especially when taken in large doses; and a quantity of the sulphate of quina, much exceeding that requisite for the cure of the disease, may be taken without inconvenience.

"If we reject those instances given in the preceding table, in which a very large quantity was employed, we shall find the average quantity of sulphate of quina, requisite for the cure of intermittent fever, to amount to somewhat more than nine grains.

"The advantages arising from the introduction of this remedy into medical practice, are these: it is efficacious, as appears from its power of curing intermittent fever, and in this respect it is, at least, equal to Peruvian bark; it contains, in the dose of a grain or a little more, a quantity of the essential curative ingredient of the Peruvian bark, equivalent to a full dose of that substance; it does not overload the stomach,

or disagree; and in a small bulk may be contained a quantity sufficient for the supply of even a large army, in situations productive of intermittent fever." (P. 270, 271.)

Six cases of *Tetanus* are related by Mr. CARMICHAEL; one of which terminated successfully. The author of this communication does not pretend to give any new view of this intractable disease; but still the cases are valuable on several accounts: in the first place, the dissections of those who died appears to have been carefully performed; and, as far as two cases can be said to go, (for, in the other three fatal cases, the friends would not permit any examination of the bodies,) they prove that the spinal canal is by no means generally implicated in the disease. They also demonstrate the fallacy of all the remedies hitherto employed for the cure of this affection; while they afford a remote hope, that the vigorous and extensive application of the tartar-emetic ointment may, under certain circumstances, be attended with happy results; since it appears that the patient who recovered had a very extensive crop of pustules produced upon the back, from the employment of that remedy: though it is right to say, that Mr. C. attributes this man's recovery, in some measure, to the spirits which he took at his own request.

In the last case recorded, the tartar-emetic ointment was attempted to be used; but the recurrence of the spasms afforded such an obstacle to its application to the back, that its failure in this instance ought not to discourage us from repeating the experiment upon as large a surface of the body as possible.

The remedies tried in the unsuccessful cases were bleeding, opium, baths, tobacco in the form of a vinous tincture, purging, and mercurial inunction; all which powerful agents appear to have been employed in the most energetic manner.

We regret that we cannot afford room for the insertion of Mr. Carmichael's general observations upon this complaint, and with which the paper concludes. We observe, however, that the author is of opinion, that the sympathetic nerve is more immediately the seat of the disease; those muscles being chiefly affected whose nerves communicate extensively with the sympathetic: the muscles of the extremities, which derive their nerves from the spinal marrow, being but little affected, and the senses and intellectual functions remaining unimpaired. With regard to remedies, our author thinks that opium, though it cannot cure, greatly alleviates the distressing symptoms: of tobacco, he has nothing favourable to report; and respecting the tartar-emetic ointment, he justly says that, if it is to do good, it should be applied upon the abdomen rather than the back, as there it is difficult to introduce it, in consequence of the spasms. He never saw either the cold or warm bath of the least use; and

the same opinion is given as to blood-letting. Mercury, Mr. C. says, has never been found useful in tetanus itself, but eminently so in those spasmodic twitchings of the muscles of the limbs in patients of irritable habits, who are suffering under wounds of those parts. Finally, our author is inclined to think that something may be expected from the employment of stimulants. In the successful case which he has recorded, spirituous liquors were freely drank; and he is inclined to ascribe the recovery in some degree to them, as well as to the tartar-emetic ointment.

It appears, from a note annexed to the paper, that he was not aware, when he suggested the use of sulphuric ether in large doses, that Dr. Reid had before observed that a dose of ether caused a relaxation of the spasms in a case of tetanus.

In any future case of tetanus, therefore, Mr. Carmichael says, he shall feel no hesitation in using alcohol, in any of its various combinations; in exciting extensive counter-irritation by means of the tartar-emetic ointment; using ether and opium freely by the mouth, as well as by enema; and purging with castor-oil and oil of turpentine.

Mr. Ryall's paper on the *Purulent Ophthalmia of new-born Infants*, is deserving of commendation, both for the accurate description he has given of the disease, as well as on account of the soundness of his practical directions as to the cure. This, if properly managed, we have generally found no very difficult task; and we cannot speak too highly of the stimulating plan of treatment, as recommended by this gentleman. We are not quite so well satisfied with his explanation of the origin of the disease; and cannot help believing and hoping that the application of morbific matter from the mother to the child has less to do with it than he appears to think. Generally speaking, the purulent ophthalmia of infants terminates favourably, though slowly; whereas, in all those cases of gonorrhœal ophthalmia which we have witnessed, the disease has run its course with the most fatal rapidity, and nothing short of the most vigorous plan of treatment can arrest its progress.

Two points of Mr. Ryall's practice demand attention: the application of all washes, of the stimulant kind especially, by means of the syringe inserted between the lids; and the great superiority of the lotion composed of lunar caustic, in the proportion of two or three grains to the ounce of distilled water, over every other form of wash.

A valuable practical caution concludes this paper. We are directed to ascertain, as early as possible, the condition of the ball of the eye; but, in doing this, to be careful not to employ more force than necessary, and not to use any speculum for this

purpose, but gently to raise the upper eye-lid with the thumb of one hand, depressing the lower one with the index-finger of the other.

Two cases of *Diabetes* are shortly recorded by Dr. SHARKEY, in which that disease was successfully combated by the phosphate of soda, taken in doses of a drachm three times in the day; the patients not having been restricted,—or rather, indeed, living exclusively upon vegetable diet, during the whole period of their cure. This is in direct contradiction of the plan recommended by Dr. ROLLO.

Dr. O'BIERNE is the author of the next communication, which is highly important, should subsequent observations confirm the author's evidence. The paper is on the *use and advantages of Tobacco in Dysentery*. Dr. O'Beirne is already known to the profession, as advocating the use of tobacco in cases of tetanus and epilepsy; and he informs us that, whilst prosecuting these inquiries, he was struck with the energetic action caused by this plant on the circulating fluids, producing the immediate effects of copious blood-letting; which effects disappeared in a day or two after discontinuing its use, thus leaving the patient nearly as strong as before. On various other occasions, observing its power of relieving pain and removing constipation, he conceived that important advantages might be obtained from its employment in dysentery.

It is right to mention, that the cases detailed appear to us genuine specimens of that disease, of which the author had ample experience during the Peninsular war; and that six out of seven of the cases are certainly almost, if not wholly, indebted to the tobacco for the cures performed. The seventh case does not seem to us to be so unequivocal a specimen, since other powerful remedies were employed; and we are by no means convinced that the benefit derived was fairly attributable to the tobacco. That we may put our readers in possession of the mode of employing this remedy, we publish, without abridgment, the sixth case, which is the most severe of those recorded:—

"Mary Neill, aged forty-five, half-starved, and nearly naked, admitted into the Charitable Infirmary, Jervis-street, on the evening of the 31st of December, 1823. Ten days previously, having slept in a damp cellar, she was seized with rigors, nausea, vomiting, tormina, tenesmus; great pain of abdomen on pressure; frequent discharges of blood, jelly, and wind, as she described. On admission, her countenance was pale; skin dry and warm; tongue white, furred, and rather dry; pulse 98, small, and rather hard; urine scanty and high coloured;

abdomen tense, and painful on pressure; nausea, and occasional vomiting; had been at stool more than twenty times during this day. Discharges, being examined, consist of blood and mucus: they were attended with the expulsion of much flatus.

An ounce of oleum ricini ordered to be given; and to foment the abdomen with an infusion containing three ounces of tobacco in two quarts of boiling water, and allowed to stand for twenty minutes before use.

January 1st, 1824.—The first application of the stupes, to use her own language, made her very weak, turned her stomach, and gave her a belly-ache; pulse now nearly as before; tenesmus almost as urgent; abdomen less painful on pressure. The oleum ricini ordered to be repeated, and the tobacco fomentation to be afterwards used, until considerable weakness of the head and stomach should be produced.

2d, nine o'clock A.M.—Passed some hard fæces last night; tenesmus not so urgent; less blood in the stools; vomiting less frequent; feels very weak; pulse not so hard, and 96. The oleum ricini and tobacco stupe to be repeated.

Seven o'clock P.M.—Has had, since morning, a free, feculent stool, slightly tinged with blood. The countenance now less pale and anxious; pain on pressure of abdomen greatly relieved; has had no vomiting since the feculent stool; also slept two or three hours since, and had some wish for food. Pulse 86, soft and full; tongue cleaning. Five grains of calomel, followed by half an ounce of the sulphas magnesiæ, in two ounces of water, were ordered to be given; and, in half an hour after, to resume the same fomentation.

"3d.—Has had, without griping, frequent and copious discharges from the bowels, of a still more natural appearance, with less blood, and no mucus. Passed urine in large quantity, and slept well during the night. Pulse now 86, full and soft; no pain on pressing the abdomen. Ordered merely to use the tobacco stupe during the day and night.

"4th.—Stools less frequent, and partly feculent and mucous, but without blood; abdomen soft, and free from pain on pressure; pulse as before; tongue still furred and dry. The oleum ricini and the same fomentation to be used.

"5th.—Had four motions since yesterday, each of hard fæces and mucus, but no appearance of blood; had slight tormina last night, which was removed by the tobacco stupe, and for which she called herself. Appearance of the tongue and countenance now much improved; skin soft and moist; pulse as yesterday; no tormina, tenesmus, or pain on pressing the abdomen. The same treatment to be repeated.

"6th.—Had three feculent and mucous motions since yesterday,—one slightly tinged with blood: these sort of discharges continue today, and are accompanied by much flatus. The calomel and sulphas magnesiæ, as once before, and the tobacco stupe, directed to be used.

"7th.—Much improved: stools frequent, feculent, and mixed with very little mucus. Treatment as yesterday.

"8th.—Improving rapidly; scarcely any mucus in the stools.

"9th.—Neither blood nor mucus appeared from this period; the motions became gradually fewer, and more natural.

"Until the 9th, the diet was similar to that in the preceding cases, with the exception that she was allowed some warm flummery and cold milk from the 5th. On the 9th, she had beef-tea and bread; from the 10th, light animal food.

"She was discharged cured on the 12th, and with more strength than might, under the circumstances, be expected."

We shall offer no apology for this long extract. The subject is extremely interesting even in a political point of view, since, as the author justly remarks, armies and navies have been rendered useless by attacks of this disease; and, under the most successful mode of treatment hitherto adopted, the patient is extremely reduced, his convalescence tedious, and he is not restored to the service frequently for months. The remedy is also every where procurable; another valuable consideration, to the army-surgeon especially.

A *Report of the Fever lately prevalent in Galway*, by Dr. Robert Graves, concludes the volume. This report is more statistical than medical, though it confirms, in every leading particular, the observations of those who have witnessed the invasion of fever among armies,—particularly the instances of Sir J. Moore's campaign, and after the retreat from Burgos. In every affliction of this kind, want of food and clothing, great bodily fatigue, and the depressing passions, have been found sufficient to excite fever, which, when once prevailing, is aggravated in its form, and rendered, of course, more frequently fatal by the crowded state of hospitals, by the great accumulation of sick upon one spot, and by the very same moral causes that, in the first instance, contributed to bring it into existence. We were particularly struck, in reading Dr. Graves' able report, not only with the coincidence of causes, but likewise the great similarity of symptoms. Diarrhœa, or rather dysentery, we always observed, in the Peninsular war, to be the precursor of fever; and we always found affections of the bowels a serious, generally a fatal, accompaniment of this form of fever.

It is in vain to look for the causes of this disease in imported contagion, or atmospheric influence: the history of the world affords but too many examples where great public calamities, by inducing famine, have laid the foundation for pestilence. Gibbon, though no medical man, has made the same remark; and we cannot better express ourselves than in the words of Dr. Crampton, that, "whenever it shall please Providence to afflict a populous country with a scarcity of provisions,—while there exist also additional causes to depress the mind, and occasion despondency,—and, moreover, when cold, wet, and unge-

nial seasons are superadded to other causes of distress,—an unusual number of fever-cases will be the result in those places where the population is most dense, and where the habits of the people are most negligent."

DIVISION II.

FOREIGN.

ART. III.—*Memoire sur la Nevrite Puerperale, ou Inflammation des Nerfs chez les Femmes en Couche; d'apres des Observations de la Maternitè.* Par M. ANT. DUGÈS.

Memoir on Puerperal Neuritis, or Inflammation of the Nerves in Child-bed; from Observations made at the Maternitè. By M. ANT. DUGÈS.

THE Memoir which we have selected for the present Article is one of considerable interest, and, as we have little of our own to add to the remarks contained in our review of the works of Mr. HUTCHINSON and others, (Sept. and Oct. 1822,) we shall content ourselves, at present, with an analysis of M. Dugès's paper, and the few observations which its perusal has suggested.

Inflammation of the nerves, according to our author, is an affection as yet but little known,—at least in its acute form. The dissertation of COTUNNIUS treats only of chronic inflammation, (ischias nervosa) which he, probably, was the first to distinguish from gout and rheumatism, with which this disease was generally confounded, under the name of sciatica. Most modern writers, although they admit the distinction, seem to refuse to this form of sciatica (nervosa) the character of inflammation, and range it with tic douloureux and similar affections. This doctrine is regarded by the author as generally correct, but somewhat too exclusive; and he agrees with Cotunnius in referring to inflammatory action, more or less chronic, the infiltration described by the latter. In the acute form, the inflammatory character, as might be expected, is more decided, and presents more unequivocal traces on anatomical examination; but the cases of this complaint are so rare, and these so rarely fatal, that it is not surprising, that our information on this point should be vague and unsatisfactory.

REIL and PORTAL assert, that they have found marks of inflammation in the cerebral nerves, BRESCHET and LOBSTEIN (see our review of the work of the latter, De Nervi Sympathetici Fabrica, &c. Feb. 1824,) in the pneumo-gastric and splanchnic, and further observations of a similar kind have recently been made

by M. MARTINET.* M. Dugès thinks it probable that the names of rheumatism and gout have been given to neuritis, whether acute or chronic; and acknowledges himself to have been guilty of a similar error on two occasions. He gives the cases to which he alludes at some length, but the one patient died without being examined after death, and the other recovered; so that in neither instance was the truth of our author's conjectures verified by demonstration. We, therefore, hold ourselves absolved from quoting them. When neuritis occurs in childbed it is regarded, says our author, as neuralgia, depending on compression of the nerves during labour,—then, if the inflammation extends to the neighbouring parts, the abscess thus formed absorbs all our attention, while the state of the nerve is neglected. From this remark it is obvious, that M. Dugès regards puerperal neuritis as much more frequent than it is generally supposed to be; he informs us, however, that this idea is neither new to him nor rashly brought forward, and with a view of developing more fully his ideas upon the subject, we shall follow him through his somewhat too numerous subdivisions. They are as follow:—1st, Simple, or circumscribed neuritis. 2d, The œdematous, that is to say, one which causes an effusion of serous fluid not only into the tissue of the nerve, but likewise into the surrounding cellular membrane. 3d, The phlegmonous, or that which brings on phlogosis, and frequently suppuration of the nerve and neighbouring parts. 4th, The œdemato-phlegmonous, which participates in the character of the two preceding; and 5th, The gangrenous, which brings on mortification of the parts surrounding the inflamed nerve. We shall analyse the account given by our author of each of these successively.

Circumscribed Neuritis. — This variety, according to M. Dugès, has almost always been attributed to compression of the nerves. But this is not universally the true explanation. It has very frequently been confounded with neuralgia, because no swelling was perceptible; but the observations of M. Martinet prove that inflammation of a nerve may exist without swelling;—in addition to which, our author refers to the diagnostic character above mentioned.

"Characters (he observes) in general so obvious, that the inflammation cannot be denied, even although we should not be able to find, on examination after death, that redness and infiltration which are constant when the disease has been of some duration, as I have more than once established under the inspection of M. Chaussier, who, I believe, admits the inflammatory character of these painful affections. I have likewise sometimes seen the nerves in appearance healthy, when peri-

* *Revue Medicale*, June 1824.

tonititis has cut off, in the course of a few days, a woman affected with circumscribed neuritis."

The author states that this variety, the duration of which sometimes scarcely exceeds five or six days, and which is often limited to some transient stitches, causes much more acute lancinating pains than those which occur in the *phlegmonous* neuritis:—It likewise yields much less readily to the abstraction of blood; opiates seldom relieve it; but baths generally avail, even in the most obstinate cases. The sciatic nerve is the most common seat of this affection, which sometimes limits its effects to the region of the pelvis, and at others extends to the thigh, leg, and even to the foot.

Œdematous Neuritis.—This variety is said to be less frequent than the preceding, and also less painful, quickly giving place to œdema of variable extent, sometimes occupying all the lower extremity,—always active in the first instance, and afterwards assuming a passive character. The pain quickly subsides, but the œdema remains obstinate, and then some tumefaction is almost always to be found in the lymphatic glands of the groin, if the neuritis has occupied the crural nerve. This variety is easily confounded with active anasarca: but the anasarca in this is only secondary, and depends on the increased effusion caused by the irritation of the nerve, and consequently of the parts on which it is distributed. The serosity is in general a little turbid, and the nerve sometimes, in addition to this infiltration, shews some spots of purulent matter.

Phlegmonous Neuritis.—This is not confined to the inferior extremities, but occurs in the arm or forearm of women in child-bed: more frequently, however, it affects the crural and other nerves in the same neighbourhood. It may readily be mistaken for simple phlegmon, and the abscess which results, marks the state of the nerve so much, that even in the dead body it alone fixes the attention of an observer not aware of the character of the disease,—an error the more likely to occur, as the woman in child-bed, like others, are liable to true phlegmonous affections. The following are the distinguishing characteristics given by M. Dugès.

"1. The pain follows the course of the nerve, and is neither deeper situated nor more superficial:—2. This pain is more extended in length *(en longueur)*, more acute, of a more insupportable character, of longer continuance, than in an ordinary abscess:—3. The swelling is likewise more extended lengthways, being always directed longitudinally:—4. The swelling always precedes the redness of the skin, and, on the contrary, follows the pain; it presents more inequalities, and is harder than in a simple phlegmon:—5. A rigor pretty constantly precedes the commencement of both, but that which ushers in the neuritis is

longer, more intense, and more fatiguing; the fever which follows is also more violent."

The author states, that, on examining the body, he has found an infiltration of concrete pus into the diseased nerve, occasionally into the surrounding cellular membrane, and more rarely into the muscular tissues. In other cases he has seen more considerable collections of matter,—the pus resembling that found in ordinary abscess.

Œdemato-Phlegmonous Neuritis.—This appears to be nothing more than the phlegmasia dolens of other writers, although our author is certainly not correct in his assertion, that almost all the moderns agree with Dr. ALARD in regarding it as inflammation of the lymphatics. Be this as it may, M. Dugès has adopted the opinion, (which however is not new,) that it consists essentially in an affection of the nerve; the reasons for this theory being, that the pain commences in the pelvis, and is accompanied by a sort of numbness in the thigh; that this pain precedes by several days the swelling and enlargement of the lymphatic glands, which takes place at a much later period, and often resembles a tense cord, sometimes having knots upon it; that the swelling, as well as the pain, always proceeds from above downwards, while other œdematous effects have an opposite course, beginning at the extremities and extending towards the trunk; that tumefaction does not always take place; whereas their enlargement and distention are the characteristics of diseased lymphatics; that the pain is more acute than in any lymphatic disease; that the symptoms run their progress with greater rapidity; and, lastly, that after the recovery, a sort of palsy frequently continues for a considerable time. He is further of opinion, that, generally speaking, we ought to suspect the lesion of a nerve, whenever there exists acute pain in an organ which is naturally but little sensible. Our author, in confirmation of his opinion, quotes some remarks of M. BOER's, and we are willing that he should have all the benefit of this authority.

"Sometimes (we give the words of M. Boër,) at the moment when we least expect it, women in child-bed are seized with a violent pain in the groin or iliac fossa, but still more in the anterior part of the leg, and often over the whole extent of the lower limb. It occurs indifferently in those who have had a very favourable as well as those who have had a severe labour. The pain commences towards the upper part of the limb, and extends towards the lower. During the first days there is neither tumor, nor redness, nor induration, but the parts cannot be moved without extreme suffering;—occasionally no intumescence supervenes at any period. *The cause of this affection appears to be, pressure exerted by the head of the fœtus on the nerves of the pelvis.*"

This is all that M. Boër says about the matter, and the only part of the quotation in any degree applicable to the doctrine of M. Dugès is that which we have placed in italics. Even this we suspect will appear of little value when we consider that pressure upon a nerve is by no means necessarily accompanied, or even succeeded, by its inflammation. Indeed, it is but justice to M. Dugès to state, that he seems little satisfied with the evidence he has brought forward to prove that phlegmasia dolens consists essentially in inflammation of the nerves, but comforts himself by declaring, that at all events there is inflammation *somewhere*, and with this unlimited qualification few will dissent from his opinions. ("Du reste, quelqu'en soit le siege il est certain du moins que cette maladie est inflammatiore.")

Gangrenous Neuritis.—On this branch of the subject our author gives no satisfactory information. Indeed he admits that no case deserving this name is likely to occur if the term be limited to mortification of the nerve itself, without that of the neighbouring parts;—but he thinks otherwise if we extend it to those instances of neuritis which give rise to sphacelus, in which he backs himself with the testimony of TOMMASINI, who holds all phlegmonous inflammations terminating in gangrene, to depend on the nerves participating in the disease. Our author likewise conjectures, that the sphacelus so frequently observed in epidemics, produced by the ergot, may depend upon the same cause.—But these, after all, are mere conjectures.

The author follows up his general description with the detail of particular instances, and, with a view of further illustrating his doctrines, we shall give an example of each of the varieties of the disease above mentioned.

Case of circumscribed Crural Neuritis.—Mary M. Gamet, aged thirty-five years, and of lymphatic temperament, had been ricketty during her infancy. She was pregnant for the eighth time, and the narrowness of the pelvis rendered the turning of the fœtus unavoidably necessary. This was accomplished on the morning of the 3d of January, 1812, after she had been twenty-four hours in labour. The operation was immediately followed by hemorrhage, and afterwards by spasmodic rigor; lastly, by fever and pains in the loins, the right iliac region, and the epigastrium. The following day the pain of the epigastrium subsided, while that of the lumbar and iliac regions increased, and extended to the anterior part of the right thigh. The fever was intense, but the lochial discharge abundant. The fifth day, notwithstanding the continuance of the pain, the secretion of milk took place, and the lochia continued to flow. Cataplasms, moistened *(arrosès)* with an aqueous solution of opium, did not produce any relief. Nevertheless the pain and fever gradually went off during the follow-

ing week:—after a time the pain was confined to the iliac region, and at length, about the sixteenth day, it disappeared altogether. The twentieth day a violent rigor took place and continued for several hours, being followed by a return of the fever and abdominal and iliac pains. These symptoms continued during twelve or fifteen days without any other treatment than diet and ——expectation! (sans qu'on leur opposât d'autre traitment que la diète et l'expectation). They gradually went off, and this patient left the hospital in good health the thirty-eighth day after her confinement.

Case of Œdematous Sciatic Neuritis.—Charlotte Dotigè, aged twenty-three years, feeble and leuco-phlegmatic, was delivered of her first child, by a natural labour, the 5th of July, 1813. The child weighed seven pounds. During the first six days transient fever and diarrhœa. The third day, secretion of the milk:—the fifth, colic, relieved by a laxative:—the seventh, towards evening, slight rigor, restlessness, and diarrhœa:—on the morning of the eighth, pain in the course of the sciatic nerve of the left side, and, at the same time, infiltration of both lower extremities, particularly the left; the tenth day the pain encreased, notwithstanding the application of anodyne fomentations. After a few days the fever ceased, but the pain continued, as well as the swelling of the left limb; both these symptoms, however, gradually disappeared by the seventeenth day, although all treatment had been discontinued. M. Dugès is decidedly of opinion that the disease could not have been caused by any pressure upon the nerve during labour, as it did not manifest itself till seven days after the accouchement.

Case of Crural and Cubital Phlegmonous Neuritis.—Mad. Berton, aged thirty-nine, of sanguine temperament, was brought to bed, at the full period, of her fourth pregnancy, the 7th of May 1812, after a labour which lasted four hours. During the first night she had a rigor of a quarter of an hour's duration, loss of sleep, fever, and pain of the abdomen. A dose of ipecacuanha excited bilious vomiting, and various liquid stools, without any benefit. In the night of the third day, she had a similar rigor, followed by similar symptoms. The night following, another rigor took place, and peritonitis became distinctly marked, and accompanied with vomiting of black matter; the lochia continued. Next day, fever and delirium. On the eighth day, the abdomen was discovered to be more painful towards the groin than elsewhere;—in the right groin was a diffuse swelling of some extent. Next day the tumor was red, very painful, and of some extent: the patient complained of violent pain in all the limbs, and a considerable swelling made its appearance at the anterior and inferior part of the fore-arm in the course of the cubital nerve. The pulse

became weaker, the delirium encreased, and, on the tenth day from the commencement the general pains, as well as those of the groin and fore-arm, continued.—The patient gradually sunk, and died in the night. The examination after death presented the effusion usual in peritonitis: in the groin and fore-arm pus was found infiltrated in the sub-cutaneous and inter-muscular tissues.

In this case we must be allowed to say, that there is no proof whatever of the pain in the groin and fore-arm having depended on any thing more than common phlegmonous inflammation,—the nerve is not even mentioned in the dissection, an omission which we think ourselves entitled to interpret, by supposing that there was nothing found to strengthen the doctrines of our author. Of the practice we would willingly say nothing, did we not conceive it to be our duty on every occasion to protest against that which is bad, and to point out the weakness of that which is nugatory and inert. But we anticipate:—our readers will expect, perhaps, that we have to object to the general bleeding, as having been insufficient, or carried to an unwarrantable extent,—to the number of leeches,—to the strength of the purgatives,—or to the doubtful administration of turpentine, as recommended by M. Martinet. It is to none of these, however, we object,—for none of these were employed. The whole treatment consisted in giving the patient whey, camphor, julep, tisan of mallows, and rubbing mercurial ointment on the abdomen; together with blisters to the legs the day before death, when the woman was rapidly sinking. In short, the patient was—not killed it is true, but allowed to die without any rational effort to save her. The French are good pathologists, but it is impossible to read their journals without being forcibly struck with the general inertness, and often with the futility and absolute childishness of their practice.

Case of Œdemato-Phlegmonous Crural Neuritis.—Marie Dumon, aged twenty-two; had been chlorotic during her pregnancy, and miscarried at the end of the sixth month, the 14th of Nov. 1811, after rather a severe fall. The labour lasted ten hours, and the child weighed three pounds. Next day she had fever without any rigor; slight pain in the abdomen; deep seated pain in the course of the crural nerve, followed by swelling and infiltration of the thigh, and then of the leg on the left side; the tumified parts gradually became red, and assumed an erysipelatous appearance. The lochia natural. The third day the same state continued, nevertheless the secretion of milk took place,—no fever. This kind of œdematous erysipelas diminished but very slowly, and did not entirely disappear till the end of a fortnight. Twelve years afterwards this woman, pregnant for the third time, returned to be confined in the

hospital, Sept. 4, 1824. Two children, weighing together ten pounds and four ounces, were extracted by the feet :—on the fourth day secretion of milk, and, at the same time, acute pain in the right sciatic region ;—intense fever. The application of twelve leeches produced no change, the pain extended itself along the course of the nerve to all the back part of the thigh. Cupping, cataplasms, vapour baths, &c. procured only temporary relief. A scald made accidentally on the abdomen encreased the pain and fever, which assumed a typhoid character, and carried off the patient on the fourteenth day.—No detail is given of the appearances after death.

Case of Gangrenous Sciatic Neuritis.— —— Jaquet, a strong woman, aged forty-one, the mother of nine children, and again in the seventh month of pregnancy, was taken, the 16th of Dec. 1820, with rigors and febrile heat, accompanied with uterine hemorrhage, which rendered it necessary to have recourse to plugging. It was previously ascertained that the hemorrhage was caused by the placenta being situated over the mouth of the uterus. The labour had lasted three days when the fœtus was turned ;—the patient lost much blood, and remained in a state of intense fever and alarming weakness. Next day the fever increased, and intolerable pain came on in the left buttock, near the origin of the sciatic nerve. These pains were followed after a short time, by the development of a livid clammy (*nateuse*) tumour. Emollients and narcotics produced no abatement of the symptoms. The pulse retained its frequency while it became diminished in strength; the prostration and paleness were extreme, and, notwithstanding the use of bark and wine, the patient died on the 24th, being forty hours after her delivery. The body was examined thirty-six hours after death. The atmosphere was dry and cold, notwithstanding which, putrefaction had commenced, and the textures were infiltrated with putrid gas, which was likewise contained in the right cavities of the heart and in the uterus ;—the spleen was softened and converted into "putrilage." The blood contained in the heart formed colourless clots of a dirty appearance,—the serosity contained little particles like grease. In all the great veins, particularly in the inferior cava and its branches, nothing was to be found but a muddy (*boueuse*) fetid matter, of a deep brown, and resembling human excrement. In the smaller veins, the blood was red and fluid. The glutei muscles, and all the cellular tissues in the vicinity of the sciatic nerve, were converted into putrid matter similar to that contained in the great veins. At a greater distance from these parts, the cellular membrane was infiltrated with reddish serum, and a similar fluid was found in the tissue separating the nervous

fibres of the sciatic trunk. The skin was purple and destitute of epidermis.

The conclusions at which M. Dugès arrives are as follow. "1. That inflammation of nerves is more frequent than the silence of authors on this subject would lead us to suppose. 2. That many of the maladies in childbed-women, designated as neuralgia, phlegmasia dolens, inflammation of the lymphatics, &c. appear to be the immediate result of inflammation of the nerves. 3. This opinion, however, requires further examination, and new investigations are necessary to establish, in a decided manner, the distinctive characters of neuralgia properly so called, of inflammation of the lymphatics, veins, &c. and of that of the nervous trunks of the limbs." Although several of the cases given by our author appear to us unsatisfactory, yet there seems some truth in the general distinction which he wishes to draw between *neuralgia* and *neuritis*, and we are not without hopes that this article may meet the eye of some of the gentlemen who have furnished the numerous and instructive cases of diseases of the nerves recently published in this Journal, and lead them to direct their attention to the subject.*

MEDICAL AND PHYSICAL INTELLIGENCE.

PHYSIOLOGY.

1. *Experiments on Vomiting.*—PROFESSOR TANTINI has lately performed a variety of experiments, with a view of ascertaining the degree of confidence to be placed in the opinions of M. MAGENDIE upon this subject. He states that, when he left the cardia free, in substituting a bladder for the stomach, after the manner done by the French physiologist, no vomiting resulted; but, when he introduced into the cardiac orifice the cannula which served to connect the bladder which was introduced in the place of the stomach, vomiting immediately took place. From this he concludes, that, in the act of vomiting, we must take into the account, not only the contraction of the abdominal muscles and of the diaphragm, but likewise of the muscular coat of the stomach itself.—(*Annali Universali,* July 1824.)

2. *Wasting of the Optic Nerves with Blindness.*—We quote this case to prove (if proofs be wanting,) that the position of M. MAGENDIE concerning the fifth pair as the nerves of vision, is untenable. M.

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* Since writing the above, we have received the Number of the *Revue Medicale* for September, in which a note is inserted by M. Dugès, intended to shew that he has not confounded inflammation of the nerves with inflammation of the veins. It is sufficient to remark, that he has urged nothing in this explanation which in any degree alters the opinions we have given above.

LEVEILLÉ found a tumor, about the size of a hen's egg, between the dura mater and the arachnoid, at the anterior and external part of the left lobe of the cerebrum, the convolutions of which were effaced to a great extent. The individual who presented this phenomenon had been long in a state of complete imbecility, without offering any other peculiarity. He had been blind for two years, and both of the optic nerves were entirely wasted, *(entièrement atrophiés.)*—*(Revue Med.* Sept.)

PATHOLOGY.

3. *Death from the Introduction of Air into the Veins during a Surgical Operation.*—At a recent meeting of the Academie Royale de Medecine, M. SAMSON read, in the name of M. DUPUYTREN, the following account:—A young girl, named Poirier, remarkable for her beauty, and the strength of her constitution, entered the Hôtel Dieu, on account of a tumor which occupied the posterior and lateral part of the neck. From its hardness, its virulence, and its want of sensibility, M. Dupuytren easily recognised that it was of a fibrous nature, and determined on removing it before it had acquired a larger size. The operation was conducted with much skill and rapidity. The tumor no longer adhered, except to the anterior shred of the integuments; and the patient, who had only lost a very small quantity of blood, bore without much complaint the pain inseparable from so minute a dissection, when all at once a hissing noise of some duration *(sifflement prolongé)* was heard, analogous to that which results from the entrance of air into an exhausted receiver. The operator stopped for a moment in astonishment. "If I was not so far from the air-passages," said he, "I should think I had opened them." Scarcely had he finished the sentence, and given the last cut which was required to separate the tumor, when the patient exclaimed "I am dead!" She was immediately seized with general tremor, then fainted in the chair, and fell motionless: in vain was every means employed—the girl had ceased to live.

On opening the body, the pericardium was found to be perfectly healthy; the right auricle of the heart was distended with air, which gave it an elastic tension, and, when its parietes were cut, this air escaped in great part, without any admixture of blood: this cavity, however, contained a small quantity of uncoagulated blood. Some blood, likewise fluid, was found in the other cavities of the heart, which were sound, and in the arteries and veins of the body, the limbs, and the brain; and, so much air was there, that the vessels, on being pricked at different points, every where gave vent to bubbles mingled with blood. The other organs presented nothing remarkable.

It is, then, to the introduction of a considerable quantity of air into the heart, that death is to be attributed. The manner in which this introduction took place is easily ascertained: a vein of considerable size, situated at the lower part of the tumor, and communicating with the jugular, was necessarily opened, and, continuing to gape at the moment when the act of inspiration drew the blood towards the chest, was filled with air, which the blood, and a movement of the tumor, must

have thrown upon the heart. The air, becoming rarified in the cavities of this organ, had distended them, prevented their contraction, and thus suddenly produced syncope and death.—(*Revue Medicale*, Sept.)

4. *Pustules under the Tongue in Hydrophobia.*—Professor KOREFF has addressed a letter on this subject to Baron DUPUYTREN, which is too important to pass over in silence. The observations of M. MAROCHETTI are already well known to the profession: he tells us that the hydrophobic virus is to be found in the orifices of the sublingual glands, on each side of the frœnum of the tongue, where one or more pustules, about the size of a lentil or millet-seed, are formed, evidently containing a fluid, which after a certain time is re-absorbed, and then the symptoms of hydrophobia burst forth; and this occurs unless the virus is destroyed within twenty-four hours after its formation. M. Koreff believes that the popular superstition of looking for a worm under the tongue in dogs, is connected with some former knowledge of the above fact; and calls to our notice a dissertation published in 1777 by HEYSHAM, in which he asserts that this worm under the tongue is merely a gland destined to the secretion of the hydrophobic virus.

Since the publication of M. Marochetti's work, M. REHMANN, of Petersburg, has observed these pustules under the tongue of a man who died of hydrophobia; but the matter contained in them was found quite indurated.

Professor ERDMANN has published an account of a method analogous to that described by M. Marochetti, employed in Esthonia, at least four hundred leagues from the spot where that gentleman made his discovery. The operator in this case was a peasant; his art was not his own invention, but transmitted by tradition; his method of treatment did not differ essentially from M. Marochetti's. Several medical men then in Prussia, in consequence of the circular order issued by the minister, have confirmed the existence of these pustules; particularly Dr. BAUMBACH, at Erfurt, who, by opening the pustules, and treating them as directed, saved his patient. Drs. ETMULLER and IDELER were not fortunate enough to save their patient, a man of sixty years of age, but they evidently were called in too late: they, however, found four pustules under the tongue.

M. Koreff observes, that so many witnesses must put this fact beyond all reasonable doubt: nor must it be looked upon as accidental, even should it not invariably be found to take place, since many circumstances may prevent the development of the pustules. If, in the first instance, the virus has been destroyed by cauterization or otherwise, they will not be found; or where the venom of the animal is exhausted, as may be the case if many persons have been bitten in succession. There may also be persons not susceptible of this poison; as is the case with regard to syphilis, variola, and plague, in certain individuals. Nor ought we to pronounce this discovery to be an illusion, as some have done, because the pustules cannot always be found when hydrophobia exists; since it is admitted that their appearance is but transitory, and that they do not, in general, last above twenty-four hours. There is some reason to think (as in the cases published by M. MAGISTEL,) that an

inefficient cauterization of the bites is likely to hasten the appearance of these pustules. M. Koreff finally remarks, that the decoction of the genista can only be looked upon as a secondary means of cure, after the pustules have been opened and cauterized, and the mouth has been gargled with a strong decoction of the same plant.—(*Journal Comp.* August.)

We conceive that the above abridged account of M. Koreff's letter will be sufficient to draw the attention of practitioners to this interesting point, and that no opportunity will in future be neglected of daily examining the tongue in those cases where the inoculation of hydrophobia may be suspected.—EDITORS.

5. *New Species of Acaris living on the Human Body.*—M. BORY DE ST. VINCENT relates the following case:—A woman, forty years of age, who had been an invalid upwards of twenty years, having obtained no relief from medicine, placed herself under the care of a person who pretended, by the use of a violent remedy, to restore her to health. She did experience sensible relief; but at the same time violent itching began to be felt over the whole body, and thousands of little brownish-coloured animals, almost imperceptible, made their appearance from those parts of the body which she had scratched. M. St. Vincent examined them with a microscope that magnified five hundred times, and found them to be a new species of acaris, much resembling the *ixodes*, having a small sucker and two feelers, composed of four joints each. The woman did not communicate these insects to any other person, not even to her husband, with whom she continued to sleep. The patient soon relapsed and died.—(*Journal Comp.* August.)

6. *Rupture of the Vena Cava.*—M. DOMMANGET relates the case of an officer of light infantry, of the army of Spain, aged twenty-five, who had enjoyed general good health until a month prior to the 23d of December, 1822, when he was confined to his house by a catarrhal affection, followed by an inflammation of the pleura on the right side. An antiphlogistic treatment removed these affections; but, on the 25th, the patient experiencing a dull pain between the shoulders, two cupping glasses were applied, and the pain disappeared. He continued to get better, and on the 30th was completely convalescent, passing the day with his comrades, and going to bed apparently in good health. On the 31st, at nine o'clock in the morning, the patient complained suddenly of pain resembling the colic, situated just below the pit of the stomach, with a sensation of weight at the epigastric region, which he supposed to be occasioned by the weight of something which he could not get rid of, notwithstanding the frequent endeavours to vomit which he experienced. When seen by Dr. BERGE (in the absence of M. Dommanget), he was found sitting upon his bed, his body leaning forwards, the hands crossed upon the epigastric region, which he was pressing forcibly, complaining of deep-seated and very violent pains; the abdomen retracted; the face pale and pinched in; respiration laboured, and a small, but not frequent, pulse. The patient lived in this condition about two hours, making repeated efforts to vomit, the respiration

becoming gradually quicker, and the sense of suffocation more intense. —Dissection showed at once the cause of this officer's death. The lungs were in a healthy condition, but at the lower part, on the right side, a quantity of coagulum, weighing thirty-six ounces, was found, and at least twelve ounces of bloody serum; on the left side another coagulum, weighing two ounces, was found, and the lung on this side had contracted, at its upper part, some slight adhesions to the pleura costalis. On examining, a tumor of two inches and a half in width, by five inches in length, was found on the right side of the vertebral column, in the course of the vena cava: towards the middle of this tumor were several abrasions, or ragged openings of the pleura, about half an inch in length, from which the blood had escaped into the chest. On dissecting the tumor carefully, it presented the appearance of a substance analogous to the spleen, though not quite so firm: fibres, running in every direction, were observed. In the centre of this fungous tumor, which appeared to be a recent formation, there was a rent parallel to that in the pleura, corresponding to a canal ten lines in diameter, which formed a substitute for the vena cava for the space of about four inches and a half, extending to the right auricle. Two other tumors, resembling the former, were found,—one in the left side of the chest, the other on the small curvature of the stomach, near the cardiac extremity. The author concludes the above tumor to have been of the nature of fungus hæmatodes.—(*Journal General,* August.)

7. *Rupture of the Heart.*—M. Bayle relates the case of a lady, aged sixty-eight, corpulent, who in the time of the Revolution had experienced a great reverse of fortune, but who had for a long time been restored to comfort, and had enjoyed good health. On the 7th of last June, having a slight degree of fever, she consulted her physician, who found her with a slight cough and difficulty of breathing, the pulse not much accelerated and quite regular; the chest sounded well on percussion throughout, and the contractions of the heart were natural; she was rather constipated; and had been accustomed yearly, every spring, to catarrhal affections, which usually lasted about a week. She also said that she had had, for upwards of twenty-five years, a tumor in the left side, which she considered as the remains of a dropsical affection, with which she was afflicted at that time. This swelling sometimes produced great pain, and she supported it with a laced bandage. The medical men tried in vain to find this tumor,—it only appeared when she stood upright. The patient also complained that, within the few previous days, she had experienced in the night an extraordinary degree of agitation, accompanied with beating of the arteries of the head, and a degree of moral irritation she could not account for. She could not then sleep; was perfectly conscious of these feelings, and laughed at them in the morning. The symptoms of catarrh and cough gradually yielded; and, on the 22d of June, no remains of disease were perceptible, except a slight heat of the skin, and increased frequency of the pulse. On the 26th, in the evening, having been up all day, and no longer considering herself a patient, whilst occupied in arranging some things in her wardrobe, on a sudden she was heard to scream out,

and in the same moment she fell without a sign of life. Many circumstances prevented the body being examined before the burial; but it was inspected six days after death, and four days after the funeral. The body was then found to be in a state of putrefaction, and gave out an extremely nauseous smell, which was much controlled by aspersions of the chlornret of lime; and they found *(as they might have readily known during the life of the patient,)* that there was really no tumor in the abdomen, the swelling arising from an abdominal hernia. In the chest, they found the pericardium containing two coagula of blood, of about three ounces in weight; and the anterior face of the left ventricle presented, at about an inch from the apex, an oval opening, a quarter of an inch long, and about three lines in breadth: its borders were ragged and torn, and the substance of the heart appeared softer in that part than elsewhere. Within, this opening was covered with a brownish fibrous concretion, mixed with the carniæ columnæ.—*(Revue Medicale,* July.)

8. *Tuberculous Affection of the Brain.*—Dr. OZANAM, of Lyons, records the following case:—A young man, twenty-seven years of age, had, from the month of December, 1821, suffered from a continual pain on the left side of the head. In January, he was seized with a strong epileptic fit, which recurred six times between that period and the 13th of November, when he was admitted into the Hôtel Dieu. He was discharged on the 16th, not having had a renewal of the fits, and appearing otherwise in good health. From the month of December, he lost all the pain in his head, and this amended condition continued nearly the whole of the following year: however, towards the end of last October, he perceived a tumor on his left temple. From that time he became timid, dull, and subject to occasional aberrations of intellect. Although moderate pressure on the part produced no pain, yet he always was apprehensive of its being touched.

On the 11th of December, he was attacked with another violent epileptic paroxysm, and was brought into the Hôtel Dieu, and which was succeeded by a second immediately upon his arrival, leaving him in a condition apparently apoplectic. On the left temple there was a prominent tumor, two inches in circumference, with œdema which extended to the eye-lids; and there was pulsation in the tumor, isochronous with the pulse, and ceasing when pressure was made upon the carotid artery. The tumor was soft, fluctuating, without any change of colour upon the skin, and circumscribed by a hard osseous border. The compression of the carotid appeared to relieve the patient, who then opened his eyes. The patient died on the fifth day after his admission.

On examination after death, the tumor appeared externally shrunk. The cranium, raised cautiously, discovered the membranes highly inflamed; and from the cerebral mass drops of blood exuded after each incision. The left parietal bone was eroded completely for the space of six lines. A tubercle, which had not suppurated, adhered to the cerebral mass, and raising up the dura mater, had caused a hernia with it and the external periosteum. All that portion of the brain corresponding to the temporal fossa was softened, and, as it were, putrified: it

contained six tubercles, of the size of small nuts, very hard, and having in the centre a gravelly yellow kernel. All the viscera of the abdomen and thorax were sound. This tumor externally had all the appearance of an aneurism of the temporal artery.—(*Journal Comp.* August.)

9. *On the Semidecussation of the Optic Nerves.*—In a letter to us from a distinguished philosopher in Germany, the following remarks occur: "I do not understand how it happens that the labours of the Germans, and even of other nations, in comparative anatomy, are so little known in England. Many observations and opinions, which are considered as new in your country, have been long known to us in Germany. In proof of this I may mention, that, in the thirty-fourth number of the London Journal of Science, there is an extract from a memoir on the "*Semidecussation of the Optic Nerves,*" in which the illustrious author, from a pathological appearance he observed, infers a partial crossing of the optic nerves, without appearing to know, not only that many authors, from similar grounds, have come to the same conclusion, but also, that this kind of crosssing had been observed in the eye of the human species by Vicq d'Azyr, Caldani, the brothers Wentzel, and Chiasmon, and by G. R. Treviranus in the eye of the Simia Aygula. *Vide Verm. Schriftin, von G. R. and L. C. Treviranus,* Th. iii. p. 168."—(*Edinburgh Phil. Journal.*)

THERAPEUTICS.

10. *Bad effects of the Ergot.*—M. Gerardin lately read to the Academie Royale de Medecine an account of certain deleterious consequences resulting from the ergot when employed to facilitate labour:—he stated that in the colonies this substance is looked upon as a sure means of producing abortion, and destroying the life of the fœtus in utero:—he therefore is of opinion, that it ought not to be administered without the greatest caution, and that it ought only to be employed in certain cases of want of action in the uterus during labour, or to expel hydatiform masses developed in its cavity.—(*Revue Medicale,* Sept.)

11. *Hydrocyanic Acid in Tænia.*—M. Galneche, of Stettin, records the following case.—A boy, three and a half years old, who was afflicted with the *tænia lata*, was recommended to eat strawberries for two days in as great quantities as he pleases, the author observing that where the presence of this worm is suspected, the strawberry generally produces a discharge of some few portions. The third day, at six in the morning, ℥ss. of castor-oil was given; at half-past six, seven, and half-past seven, he took each time fifteen grs. of the powder of male fern root; and, at eight o'clock, six drachms of castor oil. At half-past eight an abundant serous motion took place, and a quarter of an ell of the worm escaped from the anus; the little patient was then placed upon warm water, into which the worm was suffered to be suspended; it was slightly laid hold of at the orifice of the anus, and rubbed over for the space of four inches, with hydrocyanic acid. It immediately made strong efforts to return into the abdomen, so that it was obliged to be

held with some degree of force; it suffered some convulsive motions, and was expelled the length of an ell and a half. At the termination of an hour and half another evacuation produced the remainder of the worm, two ells long; the animal was dead, it terminated in a thread-like extremity, surmounted with a reddish head of the size of a millet seed, armed with a little sucker.—(*Journal der Parkitchen Heilhunde,* June.)

12. *Common Salt to correct the fœtor of Cancerous Sores.*—M. LIAUBON relates the case of a female with a cancerous ulcer in the right breast, who suffered extremely from the fœtor of the discharge, which was so intolerable that the persons who assisted in dressing the wound could scarcely remain in the room. M. Liaubon ordered a lotion of salt, dissolved in water, to wash the parts: the disease was not arrested by these means, but the fœtor was entirely destroyed.—(*Journal Medicale de la Gironde.*)

13. *Mugwort a remedy in Epilepsy.*—Dr. BURDACH, of Triebel, has discovered that the root of the *Artemesia Vulgaris* is an excellent remedy in epilepsy. He recommends this root to be gathered in autumn, about the middle of October, to dry it in the shade without washing it, and not to powder it before it is required to be used. It must be taken in powder, about a coffee spoonful (or little more than fifty grains) in a little warm beer, and about half an hour before the attack, if that can be ascertained. It produces strong perspiration, during which the patient is to remain in bed. Dr. B. recommends a day's interval between the doses, and relates five cases when perfect cures have been effected by it. Experiments have been made with this root, in the polyclinic school at Berlin, upon ten epileptic patients; the result was, that three were cured in a greater or less space of time, three experienced relief, the attacks being at longer intervals and more feeble; and with the four others no effects were perceptible. These last cases are reported by M. Hufeland.—(*Journal der Praktichen Heilkunde,* April.)

14. *Substitute for Castor Oil.*—M. HUFELAND asserts, that by mixing one drop of the oil of Croton with an ounce of syrup of poppy, a preparation is obtained, resembling, in a great degree, the Castor oil, and of which one spoonful produces analogous effects. Many successful experiments have been made with this preparation in the Polyclinic School at Berlin.—(*Ibid.*)

15. *Efficacy of Nitrate of Potass in the treatment of Hemorrhage.*—Dr. ZUCCARI, after various other remedies had proved unsuccessful, had recourse to *pure* nitrate of potass, and asserts, that it had been followed by continued success. He administered it as follows:—after a small bleeding, which was not always necessary, he mixed nitrate of potass, in the quantity of from four to six drachms, in an ounce of gum-water, two or three table-spoonsfuls of which were taken every hour; and refrigerant drinks, with light soup. The dose of the nitrate

has been carried to the extent of an ounce, in the same quantity of the vehicle above mentioned, without producing any inconvenience. The author of the paper adds, that he is about to publish a work upon the subject.—(*Annali Universali,* July 1824.)

STATISTICAL MEDICINE.

16. *Influence of Vaccination upon the Mortality of Berlin.*—M. CASPER has published a long paper, containing many curious details relative to the above subject; but we can do no more, at present, than give the result of his investigations.

1. The small-pox formerly carried off from the 12th to the 10th of the population.

2. Formerly at Berlin one out of twelve children born, died of the small-pox; now the deaths from the same cause are 1 in 116.

3. The diseases of children are more common than before the introduction of vaccination, because the number of infants that survive is more considerable.

4. These diseases formerly destroyed 39 children out of every 100; now only 34 in the hundred die of these diseases, so that in the whole 51 children in 100 died formerly, and at present only 43.

5. Generally speaking, 1 inhabitant in 28 used to die annually, now there is only 1 death in 34.—(*Journal Comp.* September.)

MISCELLANEOUS.

17. *New Regulations adopted by the Court of Examiners, Apothecaries' Hall.*—Medical Students are requested to take notice, that in consequence of some recent regulations of the Court of Examiners, it is indispensably necessary for all those who enter themselves as physicians' pupils at the hospitals and dispensaries in London, *and who intend to present themselves for examination,* to appear personally at the Hall, and to bring with them the tickets authorising their attendance on the medical practice of such institutions.

A book has been opened at the beadle's office, for the purpose of registering the date of the tickets, and the time of the Student's appearance with them. Every Student who shall bring his ticket for this purpose previously to the seventh of next month (December) will be entitled to calculate the time of his attendance at the hospital or dispensary from the day of the date of his ticket; but every one who shall come after that time, will only be permitted to calculate the period of such attendance from the day of the date of his appearance at the beadle's office.

Persons whose tickets are dated prior to the 1st of October last, are exempted from the necessity of registering such tickets. No fees to be paid for this registry.

METEOROLOGICAL JOURNAL,

From October 20, to November 19, 1824.

By Messrs. William Harris and Co. 50, Holborn, London.

	Moon.	Rain gauge	Therm. 9 A.M.	Therm. Max.	Therm. Min.	Barom. 9 A.M.	Barom. 10 P.M.	De Luc's Hyg. 9 A.M.	De Luc's Hyg. 10 P.M.	Wind. 9 A.M.	Wind. 10 P.M.	Atmospheric Variations. 9 A.M.	2 P.M.	10 P.M.
Oct.														
20			54	56	47	29.94	29.98	72	70	WSW	SW	Fine	Fine	Cloud.
21			49	57	49	29.96	29.88	77	76	SW	SSW	Fog	Fine	
22	●		50	53	54	29.85	29.78	79	79	SSE	S	Foggy		Fine
23			56	61	52	29.80	29.89	94	79	S	WSW	Fine		
24			56	63	52	29.76	29.58	80	78	SE	ESE			Cloud.
25		.03	59	64	53	29.50	29.50	78	85	SW	SW	Cloud.		Fine
26			56	58	49	29.19	29.27	80	74	S	SW	Rain		Cloud.
27		.06	51	56	49	29.43	29.53	74	72	WSW	W	Fine		
28			52	55	50	29.57	29.57	85	85	WSW	WSW			
29	☽		51	54	41	29.57	29.45	90	80	SWva.	WNW	Rain	Rain	Cloud.
30		.19	54	57	40	29.76	30.05	60	70	WNW	WNW	Cloud.	Fine	Fine
31			45	49	45	29.90	29.68	80	87	WSW	W	Rain	Rain	Rain
Nov.														
1			50	55	54	29.55	29.52	82	89	W	W	Fine	Cloud.	Cloud.
2			56	58	49	29.63	29.44	89	79	WSW	W var.	Sho'ry	Fine	Fine
3		.34	51	56	42	29.73	29.66	78	77	WSW	WSW	Sl. Fog		
4			44	47	40	29.70	29.71	75	70	WNW	WSW	Fine		
5			41	46	34	29.65	29.79	80	70	WNW	WNW			
6	○		36	45	45	29.96	29.97	79	72	WNW	S	Foggy		
7			54	57	54	29.85	29.60	92	88	WSW	S	Rain	Cloud.	
8		.22	56	57	43	29.58	29.53	91	89	SW	W	Misty		Cloud.
9			44	47	46	29.85	29.87	83	75	WNW	SW	Fine	Fine	Sho'ry
10			52	56	51	29.76	29.67	78	80	W	SWva.	F.&M.		Cloud.
11			52	56	44	29.73	29.66	94	94	WNW	WSW	Rain	Rain	Rain
12		.30	48	55	53	29.84	30.04	82	74	WNW	WSW	Fine	Fine	Fine
13			54	55	55	29.72	29.63	80	86	WSW	WSW		Cloud.	Cloud.
14	☾		56	58	40	29.47	29.60	88	80	W var.	W	Rain		
15			42	46	37	29.83	30.04	79	74	W	NW	Foggy	Sho'ry	Fine
16		.26	41	50	45	30.14	29.93	75	80	SSW	SW		Fine	
17			50	54	55	29.67	29.50	82	87	SW	WSW		Cloud.	Cloud.
18			59	58	46	29.31	29.60	88	84	SW	SW	Rain	Rain	Cloud.
19		.54	48	50	48	29.70	29.61	88	95	SW	NE	Fine		Rain

The quantity of rain fallen in the month of October, was 2 inches and 16.100ths.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

*** *It having been hinted to us that gentlemen, sending copies of their Works, prefer having their titles given at length, it is our intention, in future, to comply with this suggestion: but it is to be observed, that no books can be entered on this List except those sent to us for the purpose;—finding, in the lists hitherto transmitted, that the names of works have frequently been given as published, which have not appeared for weeks, or even months after.*

An Essay on Curvatures and Diseases of the Spine, including all the Forms of Spinal Distortion; to which the Fothergillian Gold Medal was awarded by the Medical Society of London, and presented at a special General Meeting, on the 3d of May, 1824; with some Additions. By R. W. BAMPFIELD, Esq. one of the Surgeons to the Royal Metropolitan Infirmary for Children; Fellow of the Medical Society of London; author of "an Essay on Hemeralopia, or Night-Blindness," of "Practical Treatises on Tropical and Scorbutic Dysentery," &c. —Pp. 387. London, 1824.

Nosographie Medicale, ou Elémens de Medecine Pratique, à l'usage des Elevés en Medecine et en Chirurgie, et de tous les Hommes de l'Art auxquelles la pratique ne permet pas de consulter un grand nombre d'Ouvrages. Par S. P. AUTHENAC, Docteur de la Faculté de Medecine de Paris, &c. &c. Tome premier.—Pp. 547. Paris, 1824.

De Primariis quibusdam in Medicamentorum Viribus recte Œstimandis, &c. Auctore CAROLO TRINKS, Med. et Chir. Doctor.—Pp. 26. Lipsiæ, 1823.

De Morbis quibusdam Pulmonum rarioribus Commentatio Pathologica-Anatomica. Auctore GULIELMUS MAYER, M.D.—Pp. 25, cum Tabula æneca. Lipsiæ, 1824.

Considerations sur les Convulsions qui attaquent les Femmes enceintes, lues a la sceance publique de la Maison d'Accouchment, le 25 Juin, 1823. Par M. CHAUSSIER, &c. &c.—Pp. 23. Paris, 1824.

Hints respecting the Improvement of the Literary and Scientific Education of Candidates for the Degree of Doctor of Medicine, in the University of Edinburgh. Humbly submitted to the consideration of the Patrons and Professors of that Institution. By a Graduate of King's College, Aberdeen.—Pp. 21. Edinb. 1824.

An Inquiry into the Nature, Causes, and Cure of Hydrothorax: illustrated by interesting Cases, and many living Examples of the Success of the Mode of Treatment recommended. By L. MACLEAN, M.D. &c.—Pp. 218. Sudbury, 1810.

Traité des Maladies du Cœur et des gros Vaisseaux. Par R. I. BERTIN, &c. &c. Redigé par J. BOUILLARD, M.D.—Avec six planches, pp. 464. à Paris, 1824.

L'Art de Prolonger la Vie de l'Homme; par C. F. HUFELAND, premier Medecin et Consciller d'Etat de S. M. le Roi de Prusse, &c. &c. &c. Tradnit de l'Allemand sur la seconde Edition, par A. J. L. JOURDEN, Docteur de Medecine de la Faculté de Paris, &c.—Pp. 436. Paris, 1824.

A Nosological Practice of Physic, embracing Physiology. By GEORGE PEARSON DAWSON, M.D.—Pp. 380. London, 1824.

Clinical Report on Dropsies, with Observations explanatory of their Pathology and Therapeutics; with an Appendix, on the Theory and Treatment of Organic Diseases in general. By ROBERT VENABLES, Bachelor in Medecine and Licentiate in Physic of the University of Oxford; Physician to the Henley Dispensary, and consulting Physician to the Poor-house.—Pp. 238. London, 1824.

NOTICE TO CORRESPONDENTS.

The Communications of Mr. LIDDELL, Dr. VANDEBURGH, Dr. CRAWFORD, Dr. COLLINS, Mr. YEATMAN, Mr. BROWNE, Mr. BUSH, "A MEDICAL STUDENT," Dr. DRUG, Dr. RIDGWAY, Mr. WALLER, *and* Dr. WHYMPER, *have been received.*

The Communication from Dublin we have taken the liberty of handing over to our respected Contemporary, to whom it more peculiarly belongs.

ERRATA *in our Number for October.*

Page 298, for Dr. MEYERS, read Dr. ROGERS.

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OF

THE FIFTY-SECOND VOLUME

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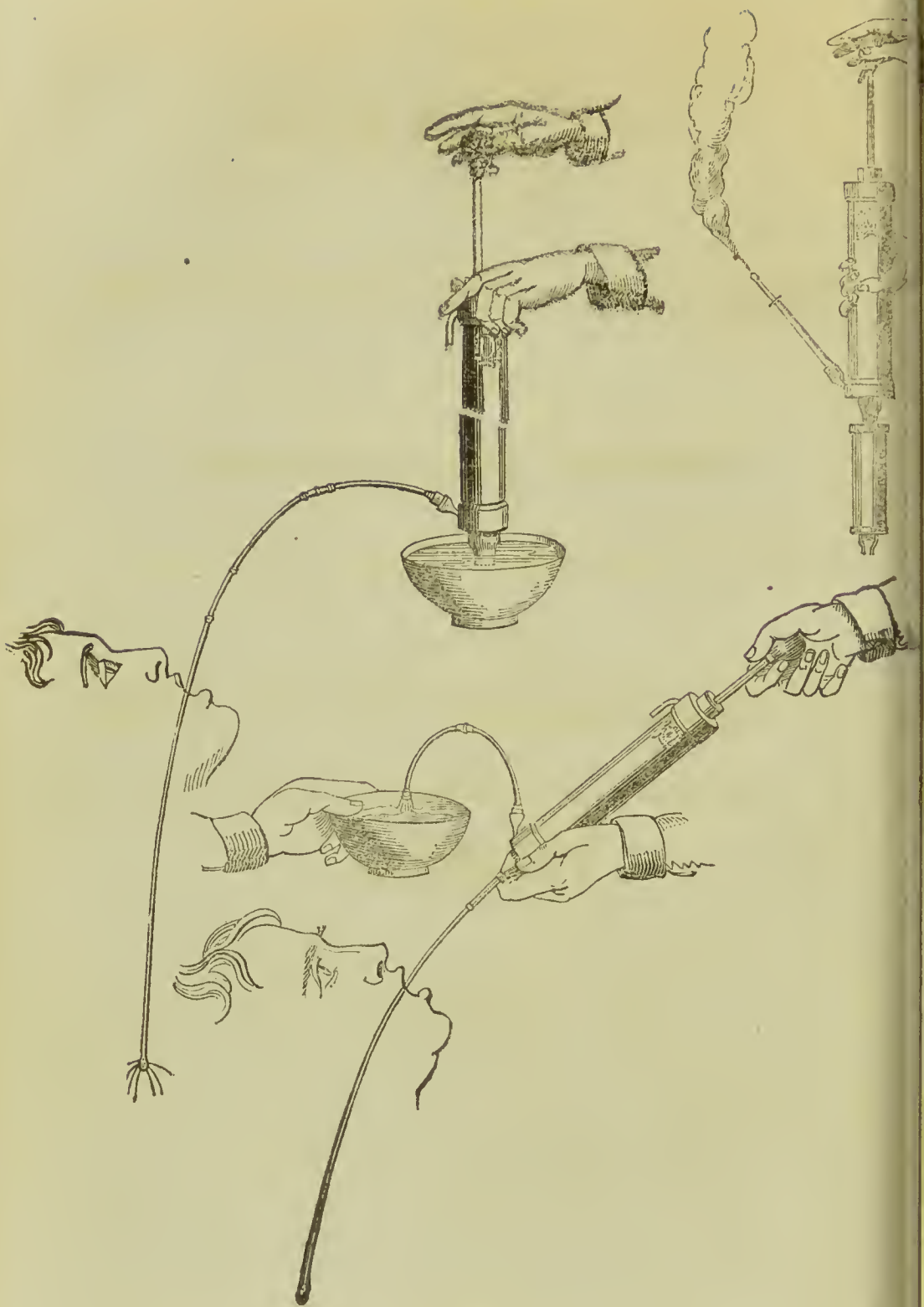

The Position of the Syringe for extracting Poison from the Stomach.

MODE OF USING THE INSTRUMENT.

The Œsophagus tube is first passed into the Stomach; next, the two first lengths of the o tubes are fixed to the lateral branch of the Syringe, and the detached brass socket being screwe the extremity, the armed end of the Œsophagus tube is inserted into it, and the fluid throwm the Stomach. The Œsophagus tube is next separated from the socket, and inserted into the ex mity of the Syringe, when a few strokes of the piston empties the Stomach.

AN

APPEAL

TO THE

MEDICAL PROFESSION,

ON THE UTILITY OF THE

Improved Patent Syringe,

WITH DIRECTIONS FOR ITS SEVERAL USES,

SHEWING, BY

A STATEMENT OF FACTS,

THE VALIDITY OF THE RIGHTS AND CLAIMS OF THE

PATENTEE.

BY JOHN READ.

"Nothing extenuate, nor set down ought in malice."

LONDON:

Printed by W. Glendinning, 25, Hatton Garden.

AN APPEAL

TO THE

MEDICAL PROFESSION,

&c. &c.

THERE are, probably, no instances in the progress of the arts connected with Medical Practice, in which so much unjust prejudice has been excited, so much bad faith displayed, so much duplicity resorted to, and so much fraud used, as have been opposed, by interested persons, to the success of an instrument, the use of which being attended with the most important results to suffering humanity, affects, of course, very materially the reputation of Surgery and the character of its professors. In this view alone, I should be perfectly justified in the attempt to remove any ambiguity that might render the value of my Instrument in the least equivocal; and still more so, when it is seen that efforts are made, not only to deprive me of what little credit the merit of the improvement may deserve, but to depreciate its utility by invidious comparisons, and to substitute nefariously, *imitative* but *inferior* Instruments, which are foisted upon the Profession *as mine*, much to my prejudice, and greatly to the injury of Medical Practice. With this apology I shall proceed at once to shew, how far

I am worthy the patronage of the Profession, and what are the just claims and merits of the Instrument, for which I humbly solicit their approbation, leaving them to decide whether the opposition I experience is grounded on public interest or *private emolument.*

My avocations in life have led me through all classes of society, and amidst the variety of my duties, I have been honoured most particularly with the patronage (and I trust it will not be deemed presuming, if, in the gratitude and warmth of my feelings, I add, the *friendship* also) of the Medical Gentlemen of my district, in the counties of Kent and Sussex. During one of my occupations of this nature, with that respectable and amiable man, Mr. Newington, Surgeon, of Goudhurst, in the year 1819, I learned that himself, and Dr. Willmott, of Hastings, had recently lost a patient (whom they had been conjointly attending) from obstruction of the bowels. I ventured to enquire of these gentlemen, if there was no apparatus by which mechanical distension might be effected in these cases; they replied, that surgeons possessed no instrument by which a sufficient accumulation of fluid with an efficient power, could be properly directed. Convinced as I was from hydraulic principles, that both these objects could be easily effected, I instantly turned my attention to the subject, and in the course of the following year, I perfected my Injecting Syringe, for which I obtained a Patent in the month of August, 1820. By order of Sir William Blizzard, I submitted the Instrument to the inspection of the Court of Examiners, at the Royal College of Surgeons, who highly approved of it. Mr. Abernethy, in particular, was pleased to express his approbation of the principle upon which it was constructed. During the year 1821, most of the surgeons of this part of the country had possessed themselves of the Instrument, which having given them, in their practice, the most satis-

factory results, they very liberally and *unsolicited,* gave the following testimony of its utility:

(COPY.)

" We, the undersigned Professional Men, strongly recommend the use of the PATENT INJECTING MACHINE, *Invented by* MR. JOHN READ, *as being the most efficient Instrument for the purpose of removing Obstructions in the Bowels; and declare that we have had, by experience, proofs of the most decided advantage it has over every other Instrument within our knowledge, invented for the same purpose."*

" Robert Montague Willmott, M. D.		Hastings.
William Duke.	Surgeon,	Do.
Thomas B. Satterley,	Do.	Do.
George Taylor,	Do.	Do.
James Duttan,	Do.	Do.
Robert Ranking,	Do.	Do.
Charles Stephen Crouch,	Do.	Do.
Robert Watts,	Do.	Battle.
James Watts,	Do.	Do.
Stephen Monkton,	Do.	Brenchley.
Jonathan Monkton,	Do.	Do.
Robert Watts, M. D.		Cranbrook.
Samuel Newington,	Surgeon,	Goudhurst.
Charles Newington,	Do.	Ticehurst.
Edward Morris,	Do.	Tunbridge.
Richard Thompson,	Do.	Rochester.
Avery Roberts,	Do.	Lewes.
Henry Verral,	Do.	Do.
John Vine,	Do.	East Peckham."

In the *following* year, (1822) Mr. Jukes and Mr. Scott, two Surgeons of London, instituted their experiments for emptying the stomach in cases of poisoning, with an apparatus which they suggested, consisting of a flexible tube and elastic bottle, furnished by Mr. Gill, a Surgical Instrument

Maker of Warwick-place, which, though it succeeded most satisfactorily, and practically demonstrated the success of the operation, did not completely fulfil these gentlemen's wishes. They therefore applied to Mr. Gill for a Syringe, in lieu of the bottle, and he shortly afterwards supplied them with one, similar to mine, except that it had stop-cocks instead of valves. That Mr. Gill modelled this Instrument from my invention, is evident to every one who compares the two, and his piracy admits of no doubt when it is known that he was in close connexion with a certain firm in Salisbury-square, that I had, unfortunately, appointed my agents, but whom I subsequently found were warmly engaged in Mr. Gill's interest, to the injury of mine. Notwithstanding my Instrument had been made, sold, and the Patent obtained, *two* years before Mr. Gill manufactured the Syringe which he circulated under the name of "Jukes' Syringe." he (Gill) has the effrontery to assert the priority of his *imitation*, a claim that he could only make by his ignorance of the date of my Patent! If he had had the prudence to look for this date at the Patent Office, he would have found it was necessary to carry his *invention* back *three* years farther than he has now done; in this case, a blustering assertion might have given some colour to the fraud, but the hint now comes too late, and will not avail him.

Sir Astley Cooper having seen my Instrument, and being desirous of trying the experiment of removing the contents of the stomach, directed me to attend with it at Guy's Hospital, for that purpose. I accordingly waited on him at that place on Friday, Nov. 21, 1823, and the following report from the Lancet, (Vol. I. No. 8.) describes the result of that attendance.

"At half-past one o'clock the operating theatre was

crowded to excess, in consequence of its having been stated on the preceding Tuesday that some experiments were to be tried on a dog this day, for the purpose of ascertaining whether liquids could be put into the stomach, and removed from it by means of an instrument, which had been lately invented by Mr. Read, of Horsmonden, Kent.

Prior, however, to the making of the experiment, a middle-sized steatomatous tumour was removed from a female, just below the inferior angle of the left scapula.

At two o'clock precisely, a dog was placed on the table. Its legs and body being secured by two or three of the pupils, an iron pestle was put into its mouth, to keep the jaws separated; and then a dram of opium, dissolved in four ounces of water, was poured into the stomach. After this, the pestle was removed, and the dog left free on the table.

In the space of twenty minutes the dog manifested a disposition to vomit, which was immediately checked by pressing the finger against the œsophagus. The opium, however, had no very sensible effect on the dog till the expiration of thirty minutes, when the dog was unable to stand upright.

When the opium was administered, the dog's pulse was 120. In seven minutes after, it became 110, and gradually sunk to 90, which was the lowest point.

At the expiration of *thirty-three minutes* from the time the opium was given, the stomach was evacuated of its contents, and washed by means of the instrument.

The instrument succeeded very well in the dog, which

appeared to be little worse for the experiment. Mr. Read was in the theatre during the whole of the time, and superintended the use of the instrument; on quitting, he received the unanimous applause of those present.

Sir Astley Cooper, just after the experiment had been tried, looking at what had been removed from the stomach, smiled, and said that the instrument would do well for an alderman after a city feast.—*(A laugh.)*"

"Sir Astley shook hands with Mr. Read, and complimented him on his ingenuity; observing, that had he lived in Greece, during the time of its splendour, instead of in England, he would undoubtedly have been crowned with laurels. It might be made applicable, (observed Sir Astley) to more purposes than one. It might be appended to the catheter, it might be used in the rectum. Addressing himself to the students, Sir Astley alluded to the success of the machine, by observing, that there was evidently to be found in the use of it a plausible and a very practicable method of dislodging the contents of the stomach; which, he conceived, it would be advisable to do by this means, where poison had been swallowed, previous to giving any medicine as an antidote. Thus far, alone, it was of most valuable importance to the profession, as well as to humanity at large."—LANCET, Vol. I. No. 11.

After the successful experiment of emptying the stomach performed by Mr. Scott upon Mr. Jukes, before Sir Astley Cooper and his class at the Theatre of St. Thomas's Hospital in December last, no doubt can be entertained of the importance of this operation in cases of poisoning; Sir Astley Cooper, in his Lecture on this subject, after advising the use of emetics in cases of poisoning by laudanum, remarks as follows:

"I certainly think, however, after the experiment which you had an opportunity of witnessing in this theatre, and that of the dog in the other hospital, that the instrument for evacuating the stomach affords the best means of saving persons, who would otherwise perish under the influence of opium. I mentioned to you on a former occasion the case of the young lady who had taken opium, in which every means which I could employ for the purpose of producing vomiting proved completely unavailing. When the œsophagus has lost its functions, which it soon does from the influence of opium, no stimulating substances will produce the least effect upon it. I sat hour after hour, by the side of this young lady, watching her progress to dissolution, without being in the least able to prevent it. If, however, I had been acquainted with the instrument which has been since invented, I should have used it with the probability of success. This instrument enables us not merely to remove the poison from the stomach, but to throw in water in considerable quantities, and to introduce stimulating remedies after the opium is removed, for the purpose of restoring the functions of the Nervous system; and this in cases where emetics cannot be even swallowed. I certainly do expect the happiest results in such cases from the invention of this instrument. The man who first suggested such an idea deserves well of his country, and they who oppose it until the instrument has been fairly tried and found useless, must be destitute of understanding. Persons who object to a proposition merely because it is new, or who endeavour to detract from the merit of the man who first gives efficacy to a new idea by demonstrating its usefulness and applicability, are foolish, unmanly, envious, and illiberal objectors; they are unworthy of the designation either of professional men, or of gentlemen."—LANCET, Vol. III. No. 6, page 174.

In speaking of the treatment of poisoning by the oxymuriate of quicksilver, Sir Astley remarks.

"It may appear that I am disposed to think too well of the instrument to which I before adverted, when I state that I believe the Syringe may also be successfully employed for the purpose of removing the oxymuriate of mercury from the stomach. I should certainly prefer it to any other means; but instead of using simple water, I should throw in a quantity of soap and water, then withdraw it; I should repeat this operation until the stomach was entirely cleansed. It has been suggested that although this instrument may be used with success for the purpose of removing the vegetable poisons from the stomach, yet it would not succeed in cases of poison by arsenic or corrosive sublimate. *This I do not believe.** With respect to arsenic, I am aware that if it were taken in a solid form, and a considerable portion had fallen on the stomach it would be impossible to remove it; but as it is usually taken, in powder, I think the instrument is very capable of removing it, because it will be for a considerable time at least kept in solution by the mucus which is thrown from the surface of the stomach, and in this state it may be removed. At all events this deserves a trial."—LANCET, Vol. III. No. 6, page 177.

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* This opinion has been confirmed by a case which, no longer ago than yesterday, fell under the care of Mr. Jukes. A female, swallowed, by mistake, a quantity of corrosive sublimate, but instantly discovering the error, sent for Mr. J. who, having first administered a quantity of the white of egg to decompose the oxymuriate, passed the tube into the stomach, and, by means of the Patent Syringe, extracted its contents, and saved the patient from the severe and destructive effects of the poison. The quantity of the oxymuriate taken was twenty grains. A report of the case, by Mr. Campbell, a Surgeon, who assisted at the operation, may be seen in the Morning Chronicle Newspaper, of Friday, September 17, 1824.

To put the utility of this instrument still further to the test of Professional opinion, Mr. Scott and Mr. Jukes in the month of February last, made a visit to the metropolis of France, and being furnished with letters from Sir Astley Cooper to the Physicians and Surgeons of the greatest rank and eminence in Paris they had an opportunity of ascertaining the sentiments of the first professional characters in that city upon this subject. The operation was performed in the house of Dr. Regnault, Physician to the King, and met with the perfect approbation of all present.

Notwithstanding the successful application of the instrument had been fully demonstrated by reiterated experiments, and its practical utility attested by the highest medical authorities in Europe, efforts were made to disparage its character by setting up, as its opponent, the Syringe which had been first used by Mr. Scott and Mr. Jukes, but which they had *themselves abandoned!* The motive for this was, that the manufacture and sale of my instrument being protected by a patent, no other person could make, or vend it contrary to my permission, without incurring the just penalties which the law inflicts upon infringements of Patent rights, and a substitute therefore, which might be made and sold generally without risque,* was set up, to preclude as far as possible, the circulation of an instrument not in the hands of the trade, although I had from the first outset, allowed to Surgical instrument makers, a commission so liberal as to leave myself but a scanty remuneration for the great expences I had incurred. This *spurious* instrument (which in some instances has been palmed upon the profession as *mine*), is no other than the Syringe first manu-

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* I shall shortly try in a British Court of Justice, whether the instrument in question is of this kind or not.

factured by Mr. Gill. It resembles mine with the exception of being furnished with stop cocks instead of valves; this alteration it was considered, would evade the violation of my patent; this is yet to be proved! As it would appear to be a prejudiced opinion if I were to give my own judgment upon this Syringe, I requested Mr. Scott, who has operated repeatedly with both instruments, to favor me with his opinion of its merits, and the following is an extract from his reply.

"In using this Syringe, it is necessary that the Surgeon should have rendered himself well acquainted with the peculiarities of each stop-cock, to prevent an embarrassment in the operation, which happens upon the slightest inadvertence in managing them. The awkward trouble of repeatedly turning these stop-cocks during the different steps of this operation, is in itself a sufficient objection to the instrument, to say nothing of the confusion occasioned by mistaking the one for the other, which is extremely likely to happen in the moment of alarm, when even the Surgeon himself, perhaps, is not sufficiently cool and collected."

To enable the professional reader to distinguish my Syringe from any other, and thus to prevent the fraud that has been long practised in substituting imitations, I shall here take leave to give a description of the "Patent Syringe," which is clearly elucidated by the Plate which accompanies the Pamphlet.

The Cylinder of the Pump or Syringe, (made in brass and in Silver,) is about seven inches in length, and one inch in diameter, contracted at its apex into a small opening for receiving the extremity of an elastic tube, which is passed into the stomach. Within this opening is a chamber containing a spherical valve, which, by rising into the upper part of

the chamber, where a vacuum is formed by elevating the piston, admits the atmosphere (or whatever it may be desirable to operate upon) to pass freely into the Syringe, but as soon as the piston is depressed, the contents of the Syringe presses the valve close upon the aperture, and prevents its escape through the opening by which it was received.

To give exit to the contents of the Syringe, a side branch is constructed, furnished with a valved chamber, similar to the one above described, but so placed as to act in direct opposition to it, so that when the Syringe has been filled from the extremity, and pressure is made by depressing the piston, the fluid closes the lower valve, and opens the lateral one, and consequently escapes through the latter aperture. To facilitate the operation of the instrument, a small pipe communicates with the upper extremity of the Syringe, which gives free ingress and egress to the atmosphere during the action of the piston, a circumstance essentially necessary in causing the instrument to work easily and perfectly.*

With this description every one will readily identify the instrument and prevent imposition being practised.

I cannot more clearly represent the motive with which the stop-cock Syringe is opposed to mine, under the name and apparent sanction of Mr. Jukes, than by inserting the following letter from this gentleman; by which I shall at once strip off the cloak that covers these transactions and show them in their true colours.

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* The Royal Arms and the Patentee's name are engraved on the Syringe, without which none are genuine.

(COPY.)

Pimlico, 4th June, 1824.

SIR,

In reply to your letter, I have to inform you, that the report you allude to of my being the manufacturer of a Syringe, for removing poisons from the stomach, *is utterly false.* If any Syringe is sold under *my* name, it is *without my authority.* Being satisfied that the stop-cock Syringe was an ineffective imitation of your Syringe, and an infringement on your patent, I have long withdrawn my sanction to it, and subsequent experience has convinced me of the superiority of your instrument, and I wish it therefore to be clearly understood, that I exclusively adopt your Syringe, and have no hesitation in recommending it to the profession in preference to any other.

I am, Sir,

Your obedient humble servant,

EDWARD JUKES.

TO MR. JOHN READ.

I must here take the opportunity of returning my sincere thanks to Mr. Jukes for the candid and liberal manner in which he has thus publicly disavowed any part in the hostility manifested against me, while, at the same time, I trust that the statement with which he has been kind enough to favour me, will satisfy the reader that the opposition I have met with, neither originates with him, nor with the profession; mine is not a combat with *science,* but with *trading* interest.

I shall now proceed to describe the action of the Syringe in removing poisons from the stomach.

The Apparatus consists of the pump; œsophagus tube; three leathern tubes; three ivory pipes (these last, with the

third leathern tube, are used only for Enemas); and a detached brass socket. The upper left hand figure in the plate, represents the operation of injecting fluids into the stomach, to dilute the poison, previous to its extraction; this is effected in the following manner. Screw the two first lengths of the leathern tubing, to the *lateral* branch of the Syringe, and next the detached socket, to the extremity of the former. The œsophagus tube is now to be passed into the stomach, which being done, insert the brass joint at its extremity, into the socket at the end of the leather tubes; the fluid to be injected being put into a basin or other shallow vessel, the end of the Syringe is immersed in it, and the piston being put into action, any quantity may be thrown into the stomach that may be desired.

To evacuate the stomach, separate the œsophagus tube from the socket (leaving the latter attached to the leathern tubes) without withdrawing it from the throat, and insert it into the extremity of the Syringe,; let an assistant now hold a vessel, to the end of the leathern tube, and by working the piston, the contents of the stomach may speedily be pumped into it, as is shewn in the under figure of the drawing. By thus transferring the end of the œsophagus tube from one situation to the other, the two processes of washing and emptying the stomach may be repeated as often as is judged necessary by the operator. Thus it is seen that the Syringe is furnished with two valvular apertures, through *one of which* the contents of the stomach passes into the cylinder, and are then immediately forced through *the other*, into the receiving vessel. This double operation is effected by repeated strokes of the piston, which slides so easily, that an infant may use it. The manner in which the Syringe is held in these two separate operations, is very important. In the first, as is seen in the plate a perpendicular position, is the most eligible; but in the second, the Syringe must be

held in an *inclined* position, at about an angle of 45°, with the lateral tube *upwards*. These positions preserve the valves upon their proper bearings, without which, the instrument cannot act perfectly.

In cases of retention of urine, it frequently happens that in consequence of hæmorrhage and other causes, the catheter becomes so obstructed that the bladder cannot be emptied: It was suggested by Dr. Cloquet, a celebrated Surgeon of Paris, to effect this purpose by fixing a pump to the catheter. The Patent Syringe performs this operation with extreme facility, and has been honoured with the entire approbation of Dr. Cloquet. For injecting the bladder, which is an operation every day becoming more frequent, it is of course equally eligible. For these purposes I have constructed elastic gum catheters to be fixed to the Syringe.

As an Apparatus for conveying nourishment into the stomach of Persons afflicted with Stricture of the Œsophagus, the Patent Syringe is found to possess obvious advantages.

This Pump is also capable of being adjusted to cupping-glasses, by which any degree of exhaustion can be made the operator desires; and in the same manner it may be rendered a very effectual Instrument for drawing breasts of purperal females. I have had glasses made for these uses, which may be obtained with the rest of the Apparatus.

The upper right-hand figure in the plate, represents the Syringe, with a Canister, for the purpose of injecting Tobacco fumes into the intestines. It is used in the following manner. Unscrew the cap of the canister, and take out the perforated plunger; put in the tobacco (half an

ounce or an ounce) and replace the plunger lightly upon it; then put on the cap and screw it to the end of the Syringe; hold a lighted candle close under the bottom of the canister, and a stroke or two of the piston of the Syringe will light the tobacco. The enema tubes being now fixed to the side branch, and the pipe introduced into the rectum, the tobacco smoke is forced into the intestines as long as the Syringe is worked in the usual manner.

I have lastly to speak of my Syringe, as an instrument for administering Enemas, which was the original intention for which it was constructed, and in this point of view, it is of the highest importance.

The objects of administering Enemas, are considered to be of three kinds. 1st. For softening and diluting retained fæces. 2ndly. For stimulating the bowels and thus provoking evacuations; and 3dly. For producing mechanical distension.

It must be obvious to every medical practitioner, how very inadequate the old Apparatus of the pipe and bladder, is, to the completion of these objects, and thence it is, that various instruments have been at different times devised to remedy the deficiency; but ingenuity had been exercised in vain, and the profession were still in need of an instrument to effect these valuable ends, until the "Patent Syringe" supplied the desired object. It had hitherto been the custom of Surgeons, in administering enemas, to throw up, three quarters of a pint or a pint of fluid, and a clyster, even in the severest cases, rarely exceeded the latter quantity. Now, by an attention to the anatomical structure of the lower intestines, it must be apparent, that such a quantity would be incapable of effecting more than a mere solution of the fœculent matter contained in the rectum, and of stimulating this bowel only; for the calibre of the rectum is so great,

that under ordinary circumstances, it can of itself contain a pint of fluid. Most commonly the cause of constipation exists in the colon; how then can the disease be relieved or removed by a clyster that is expended before it reaches the part affected? It will be urged, perhaps, that the superior bowels will be affected sympathetically, when the lower bowel is stimulated; but granting this to be fact, how desirable is it to *ensure* the good effects of an enema by administering a quantity sufficient to reach the offending part of the intestinal canal! But this could not be effected by any of the existing instruments, as not one of them was of a size to contain a sufficient quantity of fluid; and if they had been, it would have required a greater degree of power to force it into the bowels, than could have been conveniently or safely directed. I may perhaps be asked, why a large quantity could not be applied by recharging the instrument, or by discharging other instruments ready filled, and placed at hand for that purpose? I need not point out the fallacy of this argument, to medical men, practically acquainted with the operation; for they are well aware of the difficulties which suspending the operation would present to the introduction of separate portions of fluid, as the *conatus ejiciendi* is, generally, so quickly excited, as to leave but a short interval between the injection and expulsion.* An instrument was therefore wanted, that was capable of throwing up any quantity desired, in one continuous operation, and the Patent Syringe most completely effects this. Again, mechanical distension can only be effected by an instrument affording power with volume; an attention to hydraulic principles shows how both these are yielded by the Syringe I have constructed. The bulk of the fluid contained in the instrument is so small, that the force necessary to propel it,

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* I have been favoured with these Physiological remarks by Mr. Scott, and of which I have gladly availed myself.

scarcely requires the efforts of an infant; but the effects of these efforts, multiplied by repetition, increase to an almost infinite ratio, and at length present an overwhelming force, capable of bearing down all opposition, and overcoming all natural restraints. To try the power of the syringe, I fixed the injecting pipe firmly into the rectum of an Animal that had been recently killed, and proceeded to pump into the bowels a large quantity of water, and I continued the operation with the same ease and freedom, until the intestinal canal, stretched beyond its tone, burst with the distending force.

In corroboration of the good effects of this instrument in obstructions of the bowels, I shall take leave to extract the following remarks from one of the most respectable medical publications of the present time.

"Dr. Chisholm has related a case of obstinate constipation of the bowels, relieved by Read's Injecting Machine, after various other means had failed. The obstructions had existed three or four days before Dr. Chisholm saw the patient with Mr. Beet, Surgeon, of Ashford. When seen by Dr. Chisholm, the patient's extremities were cold, and stercoraceous vomiting had come on. A tepid solution of yellow soap was prepared, and more than *a wash hand basin full* was gradually but perseveringly thrown up by means of the instrument above mentioned, and prevented from returning by napkins pressed to the anus. *The patients belly now resembled a drum.* When the injection was allowed to come away, the spectators had the gratification to find it mixed with fœces. Shortly after this, the patient passed flatus and stools, and all the bad symptoms quickly vanished. I have had many other cases" says Dr. Chisholm, "where Read's Machine was of infinite service, and I think every medical practitioner should have one in his possession."—*(Med. Repos. No. 1, New Series, Page 944.)*

The following remarks are to be seen in Vol. 4, No. 15, page 742, of the Medico-Chirurgical Review.

For many months past we have been in the habit of employing Mr. Read's Patent Injecting Apparatus, which is so small as to be carried in the waistcoat pocket, and so powerful as to throw fluids to a great distance. The object of our present notice, however, is to inform our readers that Mr. Read has adapted to the Instrument, a flexible elastic tube, most admirably calculated for throwing fluids into the stomach, and then extracting them, in cases of poisoning. We have attentively examined the instrument, and we know it is approved of by Sir A. Cooper, and some of the first Surgeons of the Metropolis; we think it of so much importance, that we seriously recommend it to every private practitioner."

I cannot pass over the following letter without presenting it to the readers attention, coming as it does from a practitioner respected for his talents and observation.

"MR. READ,

I am desirous of informing you, that I have had frequent opportunities of using your valuable Instrument in cases of violent inflammation and obstruction of the bowels, and it has succeeded beyond all expectation in affording relief to my patients. So fully convinced am I, of the superiority of your Injecting Syringe over any other instrument made for the same purpose, that I have no hesitation in asserting that it is invaluable to medical men, and it is my opinion, that almost every private family should be in possession of it.

"You are at liberty to make what use you please of this Letter.

I am, your's, &c. &c.

Goudhurst, Jan. 20, 1822. SAML. P. NEWINGTON."

I shall close my subject by the following explanation of the manner of using the Enema Apparatus. Fix the leathern tubes to the lateral branch of the Syringe (either two or three, as may be most convenient to the position chosen for the operation), and put the fluid to be injected, into a wash-hand basin or other convenient vessel; the ivory pipe being inserted into the rectum, and the extremity of the Syringe into the fluid, the pump may be worked, either by the patient or some other person; but the facility with which it can be accomplished by the former, renders it truly valuable for domestic use.

READ'S

NEW IMPROVED PATENT SYRINGE,

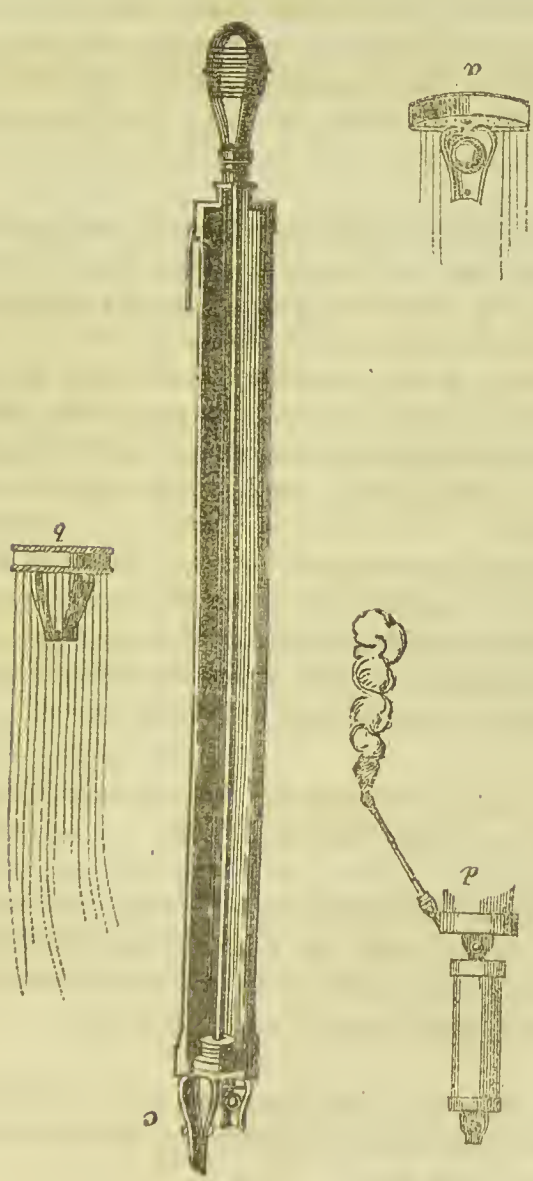
FOR DOMESTIC & HORTICULTURAL PURPOSES.

THE Public are respectfully solicited to the Inspection of this Instrument, which for its convenience and utility in Domestic and Horticultural Purposes, claims universal regard. For watering Pines and all other plants in Conservatories and Hot-houses; and for the destruction of Insects upon trees in Forcing-houses or on Walls, it far exceeds the Barrow-engine in the facility of its application. The Horticultural Society of London, to mark their approbation of it, have been pleased to honour the Patentee by conferring upon him their Silver Medal for the Invention. It has of late been much used for washing the Windows of Houses and Carriages, and is found to be a most effective apparatus for Fumigating Trees and Hot-houses.

This Instrument also, in case of need, is an excellent Fire-engine, as from its portability it can be applied, upon the first breaking out of a Fire, when no sort of assistance could be derived from the Engines of the Insurance Companies, and its utility in this way having been proved by actual experience, most of the Fire Offices have prepared themselves with it, and it is now, very properly finding its way into Private Families, as a safeguard against the destructive and hazardous effects of Fire.

Section of the Horticultural Syringe.

a.—Cap for destroying Insects on Wall-trees and Plants.
b.—Cap for Watering Forcing-houses and trees in Blossom.
c.—Cap for Extinguishing Fires.
d.—Cap for the Tobacco Fumigation.



EXPLANATION OF ITS USE.

The Cap *a* is to be screwed on when the Syringe is used for washing away Insects from Peach, Nectarine, and Apricot Trees. Set a pot

of water near the stem of the tree, and having charged the Syringe, throw the shower between the tree and the wall, directing it against the *back* surface of the leaves, where the insects are placed, by which mode, the fluid effectually and speedily sweeps off both the insects and their eggs and larvæ, and thus prevents a succession of these injurious animalculæ. The Barrow Engine can only be brought to play upon the *front* of fruit trees, and dislodges, therefore, the insects but very imperfectly, without removing, in the least, their eggs, that stick upon the under surface of the leaf. This Cap is also used for watering Pines.

The Cap *b*, has smaller perforations than the above, and as it throws the fluid in a light and gentle moisture, almost like a dew-fall, is particularly eligible for sprinkling Forcing Houses of all descriptions, and Trees in bloom, and not only clears the latter of insects, but deposits the water in such a gentle manner upon the leaves, that, if it be applied at night, preserves the plant moist until the next morning, materially tends to its nourishment and health, and prevents the formation of animalculæ, which breed rapidly in the *dry* but perish by moisture. The Practical Gardener is aware of this, and takes care, during warm weather, to supply his trees with moisture while their buds are forming and before the blossom expands. This Cap is used also for washing the leaves of trees, plants, and vegetables when frost-nipped in the cold nights that often prevail during the spring; it should of course be done before sun-rise.

The Cap *c* is used for extinguishing fire and for washing the coarser sorts of trees, as Pears, Plumbs, Cherries, &c. against walls, and for general watering in lieu of the Barrow Engine, and in this way can be applied more efficaciously than the latter, as it may be brought into immediate contact with the plant, or applied in any direction that may be desirable, which the Barrow Engine cannot, on account of the impracticability of bringing it over the beds.

By the application of the Syringe there is no useless expenditure of water, and it is generally found that two, or at most three charges is sufficient for a large tree.

The Fumigating canister *d*, is used in the following manner. Having fitted the brass tube to the side opening, unscrew the top, take

out the perforated plunger, and put about an ounce (or as much as is desired) of tobacco (or tobacco paper, as it is called) into the canister, replace the plunger and allow it to sink upon the tobacco with its own weight only, and having put on the top, screw it to the Syringe, and next apply a piece of lighted paper to the nozzle of the canister, when one or two strokes of the piston sufficiently lights the tobacco, the fumes of which instantly pass in a copious dense stream from the extremity of the side tube, and may thus be readily conveyed to any plant, or even to any part of a plant. When applied to beds of roses or to plants under walls, the operation is greatly facilitated by throwing a piece of canvas over the bed, or hanging it against the wall so as to cover the trees. The canister is not liable to become choaked as the Fumigating Bellows are, but continues to act freely until the tobacco is entirely consumed.

The Patentee, after an active and extensive experience of Forty Years in Practical Gardening, humbly offers the above explanation of the uses of his Garden Syringe to the attention of young Horticulturists, who may not despise a few simple but useful hints.

The above Instrument, as well as the Surgical Syringe, is sold by Pepys, Poultry; Stodart, Strand; Millikin, Strand; Thompson, Great Windmill-street; Evans, Old Change; Messrs. Manly and Stone, Paternoster Row; by most Nurserymen and Furnishing Ironmongers, and by J. Read, the Patentee, No. 30, Bridge House-place, Newington Causeway, Southwark.

Neither of the above Instruments are genuine except Stamped with the Royal Arms and Patentee's Name.

Printed by W. Glendinning, 25, Hatton Garden.

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